Navigate the future, a playbook for libraries

Information literacy and research workflows in *the age of AI*

ELSEVIER

Advancing human progress together

72% believe AI (including GenAI) will have a transformative or significant impact on their area of work.

Insights 2024: Attitudes Toward AI

Contents

Why this *playbook?*

Artificial intelligence is transforming how research is discovered, analyzed, and shared. From streamlining workflows to uncovering new insights, AI has become a catalyst for innovation across academia. Yet with these opportunities come new challenges: ensuring data quality, maintaining research integrity, and safeguarding ethical use.

Libraries stand at the center of this transformation. As trusted stewards of knowledge, they are uniquely positioned to guide researchers, educators, and students through this new era by championing responsible adoption, fostering digital and AI literacy, and upholding critical thinking.

This playbook provides practical strategies, real-world examples, and insights to help libraries navigate the evolving research landscape. It offers the tools and guidance needed to harness AI's potential responsibly empowering your community to advance discovery with confidence and integrity.

Information literacy in the *age of AI*

More than a skill, information literacy is a mindset and foundation for lifelong learning. In today's fast-moving, AI-powered information landscape, your role helps your community not just find information, but to question, evaluate, and use it with integrity and confidence. With AI and new search technologies, information is more accessible—and more complex—than ever. Misinformation, bias, and "hallucinated" content are real risks.

AI is not just a new technology but an evolution in information retrieval. At Elsevier, we combine AI with trusted, peer-reviewed content to deliver mission-critical insights that help impact makers like you succeed. By transforming complexity into clarity, researchers and libraries can focus on trusted and credible research, distilled from all the noise.

- **AI literacy**, a branch of information literacy, is the ability to understand, use, and evaluate AI tools, including their ethical implications.

- **Extractive AI** scans large volumes of data to identify and extract key phrases, sentences or data points. Used to answer questions, highlight connections, or provide concise summaries. Techniques like natural language processing (NLP) have powered extractive approaches in tools and solutions for more than a decade at Elsevier.

- **GenAI** is a system that generates new content (text, images, etc.) based on learned patterns, distinct from traditional AI that classifies or retrieves existing data.

- **Agentic AI** is where AI systems are designed to act with more autonomy, so they do not just respond to prompts but can set goals, plan, make decisions, and carry out tasks independently. By leveraging external tools, adapting to new information, and executing multi-step workflows, they move beyond simple Q&A to become active digital assistants or agents that help users achieve specific outcomes.

- **Large language models (LLMs)** are the backbone for many AI applications and are advanced AI models trained on massive datasets to understand, generate, and summarize human language. They interpret prompts and produce coherent, context-aware responses. Any AI system, however, is only as good as the data it is trained on and non-academic grade tools are well-known for producing hallucinations (false or misleading AI outputs presented as fact).

- **Vector search** is a technology that goes beyond matching exact keywords, translating words, phrases, or even entire documents into numerical representations called "vectors". They capture the meaning and context of the content.

- **Retrieval-augmented generation (RAG)** is a technique that enhances LLMs by allowing them to retrieve and incorporate up-to-date, relevant information from external sources, like databases, document repositories, or the web, before generating a response. This grounds AI outputs in authoritative, current knowledge, reducing hallucinations and increasing transparency. Especially important in academic and research settings, where accuracy and source traceability are critical.

- **Retrieval-Augmented Generation (RAG) Fusion** (A patent-pending technology from Elsevier) enhances GenAI by grounding responses in trusted, up-to-date scholarly content from Scopus and ScienceDirect. It generates multiple query variations, performs comprehensive vector and keyword searches, and intelligently ranks results to deliver nuanced, balanced insights. We can bridge knowledge gaps, reduce hallucinations, and support users in discovering relevant information efficiently.

> *Over 95% user satisfaction rating for Scopus AI's RAG Fusion-powered features since its launch in 2024, accelerating research workflows and enhancing discovery.*

Responsible AI: *principles and practices for libraries*

AI holds immense promise for accelerating research, enhancing education, and transforming library support. However, with this comes significant responsibilities. Without careful design and use, AI can produce misleading information, reinforce biases, and compromise privacy; risks that can undermine trust in academic work and damage reputations.

Responsible AI adoption and progression are essential to harnessing AI's potential while safeguarding the integrity and reliability of scholarly communication. Responsible AI means designing, deploying, and using AI tools in ways that are ethical, transparent, fair, and respectful of privacy. Libraries are trusted stewards of knowledge and play a pivotal role in guiding researchers and students through the evolving AI landscape.

Understand Elsevier's five responsible AI principles

Our responsible AI practices are embodied in five core principles that guide the development and deployment of solutions like Scopus AI, ensuring that our AI tools deliver mission-critical insights with integrity and trustworthiness:

Consider the real-world impact on people
We prioritize the people who use our solutions and those affected by them. We think about and understand diverse user needs, anticipate and plan for potential harms, and design AI applications to support equitable and positive outcomes.

Prevent the creation or reinforcement of unfair bias
AI systems can inherit biases present in their training data. We actively mitigate this by grounding AI responses in trusted, peer-reviewed content and employing rigorous prompt engineering, evaluation frameworks, and red teaming to detect and reduce bias.

Explain how systems work
Transparency builds trust. Scopus AI provides clear citations for every claim it makes and explains its search and response process, including how queries are interpreted and optimized. Users can see the confidence level of responses and understand when the AI search cannot provide a credible answer.

Provide accountability through human oversight
Human expertise remains critical. We incorporate continuous human review, user feedback, and algorithmic impact assessments to monitor AI performance and address risks. Libraries and researchers are encouraged to maintain critical oversight when using AI-generated content.

Respect privacy and champion robust data governance
We protect user data rigorously. Queries are handled in compliance with global privacy regulations like GDPR, and data passed to AI models is not used for training or stored unnecessarily. This ensures confidentiality and peace of mind for users and content creators alike.

AI in academia: *a new reality*

We're all feeling the shift. AI is no longer a distant promise, it is embedded in the research workflow, changing how we discover, synthesize, and communicate knowledge.

Libraries know firsthand how these tools are reshaping education, research, collaboration, and innovation. But with this transformation comes a new set of challenges and responsibilities. Researchers today face a complex landscape. The volume of published literature grows every year, but time and resources remain limited. Many spend more time searching, reading, and organizing information than doing research. This "digital debt" leads to frustration, missed opportunities, and even burnout. You get the same questions over again, like "how do I keep up with the latest developments in my field?", "how can I learn about new topics quickly?", and "where do I find the next breakthrough idea?".

Students also need to broach unfamiliar subject areas, learning how to navigate the literature in a low-risk environment that supports good scholarly practice and won't atrophy their critical faculties. They're looking to gain the AI skills that will help make them employable in rapidly changing job markets.

In their teaching role, Faculty need to ensure their teaching stays relevant and keep students engaged by meeting changing expectations around technology. They need to introduce their students to the basics of research in a safe environment that is compatible with the demands of serious scholarship.

Researcher pain points: what's holding us back?

Information overload: drowning in data
The sheer scale of academic publishing is overwhelming. Scopus data shows that the volume of published literature has grown by more than 5% each year for the past two decades. For every new research question, there are thousands of articles to sift through. Traditional search methods that rely on keywords and Boolean logic often return either too much noise or miss relevant, nuanced connections. Researchers and libraries alike are spending more time filtering, validating, and organizing information than ever before.

Learning about new topics quickly: the GenAI advantage
When you're new to a topic or crossing into a different discipline, the learning curve can be steep. GenAI tools change the game by allowing researchers to ask questions in plain language and receive clear, referenced summaries. Instead of spending days or weeks building domain knowledge, researchers can orient themselves to a new or unfamiliar discipline in minutes. GenAI can also translate complex jargon, summarize foundational papers, and highlight key experts and emerging themes making research more accessible for everyone, regardless of background or experience. However, the summaries are only ever as good as the data being used to generate them and hallucinations and fake references are common with many freely available GenAI tools.

Uncovering breakthrough ideas: from search to synthesis
Breakthroughs often happen at the intersection of disciplines or when someone spots a pattern others have missed. AI offers the potential to surface connections that traditional search may overlook. By analyzing the semantic meaning of research, AI tools can suggest novel research gaps, highlight "white space" in the literature, and point to emerging trends. This helps researchers and librarians move from simply finding information to generating new insights and driving innovation, collaboration and increasingly, cross-disciplinary research.

The AI metamorphosis: *rapid transformation in research*

We are witnessing a metamorphosis in how research happens. AI is automating repetitive tasks, accelerating literature reviews, and enabling researchers to focus on higher-value work. AI is not just a tool—it's becoming a research partner, supporting everything from hypothesis generation to data analysis and manuscript preparation.

71% expect generative AI dependent tools' results be based on high quality trusted sources only

Insights 2024: Attitudes Toward AI

Rather than eliminating critical thinking, the adoption of AI in research and learning is prompting librarians to reconsider how critical thinking is applied throughout the process of acquiring and evaluating knowledge, to develop new strategies. While responses to questions may be more readily available, the need to evaluate these responses will become even more important. Information literacy, including AI literacy, will remain imperative as will critical evaluation. In fact, engaging critically and ethically with AI tools remains paramount and a human-centered critical stance is at the heart of Elsevier's approach to AI.
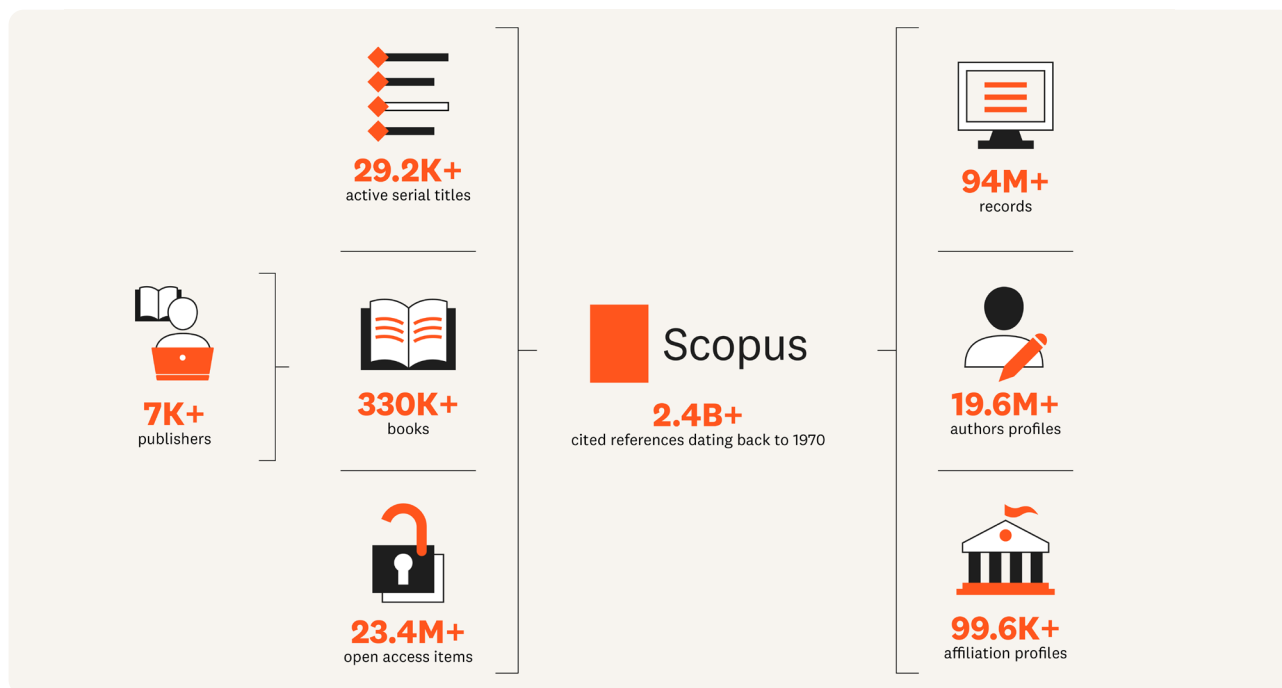
Unlocking research efficiency and insights with Scopus AI

In today's fast-paced research environment, staying ahead requires more than just access to information, it demands tools that deliver reliable, actionable insights quickly. Scopus AI transforms how researchers and institutions explore, understand, and act on emerging knowledge.

Scopus AI. Trusted Content. Powered by responsible AI

The future of AI in libraries is one of collaboration, continuous learning, and responsible innovation. Our research shows that while awareness and usage of AI are growing rapidly, trust hinges on transparency, accuracy, and ethical design. Embracing these principles will not only enhance your support but also help those making an impact - you, your colleagues, educators, and students - to advance human progress with confidence and integrity. By integrating cutting-edge AI technologies like Scopus AI, grounded in trusted scholarly content and guided by responsible AI principles, turn complexity into clarity and deliver mission-critical insights that accelerate discovery and learning.

29.2K+
active serial titles

7K+
publishers

330K+
books

23.4M+
open access items

Scopus

2.4B+
cited references dating back to 1970

94M+
records

19.6M+
authors profiles

99.6K+
affiliation profiles

Scopus AI is transforming how we discover, synthesize, and act on research. Built on trusted, peer-reviewed content and powered by responsible generative AI, Scopus AI is designed to help you and your community navigate the ever-expanding world of academic literature faster, smarter, and with greater confidence.
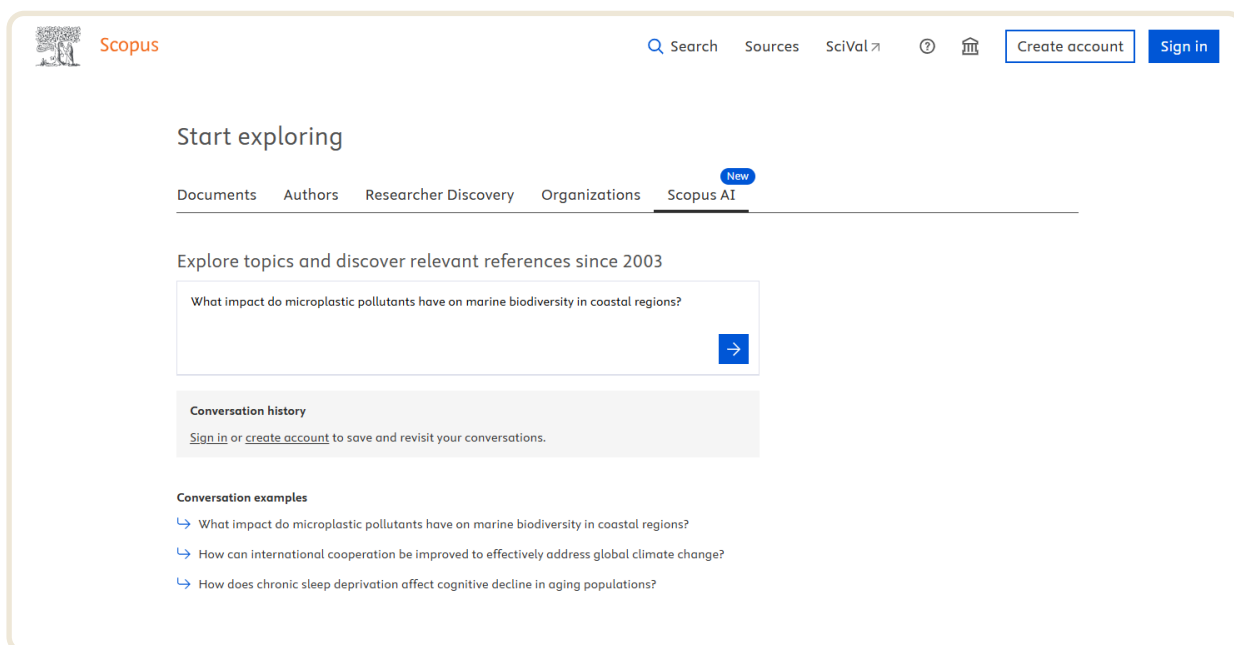
Since the launch in early 2024, Scopus AI has maintained user satisfaction ratings of over 95%, reflecting its real-world impact and value to the research community. Developed in partnership with the academic community, we regularly enhance Scopus AI based on user feedback and advances in responsible AI. All features are built on Elsevier's Responsible AI Principles, ensuring privacy, transparency, and fairness in every interaction. A human-centered approach is at the heart of our approach to AI.

 "As one of the directors for Undergraduate Research, this has proven to be a unique and valuable tool for teaching and getting students to engage in research activities. SCOPUS AI has the potential to greatly accelerate the productivity of the programs and will allow us to initiate even more research programs and support more undergraduates in these scholarly activities. I believe it will be a game changer in the University's goals of transformational education." – Richard Sanker, Ph.D. Senior Director Office of Prehealth Studies, Undergraduate Research at Baylor University.

By combining trusted content with advanced AI, support smarter, faster, and more responsible knowledge discovery.

> *Nearly half (42%) of those with ethical concerns about AI cite as a top disadvantage that it is unable to replace human creativity, judgment and/or empathy.*
>
> Insights 2024: Attitudes Toward AI

Here are five ways Scopus AI helps you work smarter, faster, and more confidently in your research endeavors.

Save time with reliable, digestible summaries
Researchers often spend hours sifting through countless papers to find relevant insights. Scopus AI addresses this by generating accurate, easy-to-understand summaries sourced from trusted content, significantly reducing research time. Its patent-pending RAG Fusion technology cites sources and indicates confidence levels, which minimizes hallucinations and ensures you rely on reliable evidence.

Scopus   🔍 ☰

What impact do microplastic pollutants have on marine biodiversity in coastal regions? •••

What impact do microplastic pollutants have on marine biodiversity in coastal regions?

Show Copilot steps ⌄

Summary

Impact of Microplastic Pollutants on Marine Biodiversity in Coastal Regions

Microplastic pollution poses a significant threat to marine biodiversity, particularly in coastal regions. These pollutants, defined as plastic particles less than 5 mm in size, originate from both primary sources (manufactured microplastics) and secondary sources (fragmentation of larger plastics) [1] [2] [3]. The pervasive nature of microplastics means they are found in oceans, lakes, rivers, and coastal areas globally, including Africa, Asia, North America, and Europe [1] [2].

Key Impacts on Marine Biodiversity:

- **Ingestion and Health Issues:** Marine organisms, including fish, dolphins, crabs, and plankton, often ingest microplastics, mistaking them for food. This ingestion can lead to physical blockages, reduced feeding, and internal injuries, ultimately causing health issues and even death [4] [5]. For instance, ingestion of microplastics by marine animals can interfere with organ functions, reduce growth, and lead to suffocation [4] [5].

- **Bioaccumulation and Trophic Transfer:** Microplastics can bioaccumulate in marine organisms and transfer through the food web, affecting higher trophic levels. This bioaccumulation can lead to increased concentrations of microplastics in top predators, causing significant ecological disruptions [6] [7]. The trophic magnification effect has been observed, where top predators contain much higher microplastic concentrations than lower trophic levels [7].

- **Habitat Disruption:** Coastal habitats, such as seagrass meadows, are particularly vulnerable to microplastic pollution. Microplastics can disrupt these habitats by altering microbial communities, impacting nitrogen cycling, and causing physiological stress to marine fauna [8].

| Ask a follow-up question | → |

Scopus AI's quality of results may vary. How it works   Share feedback

References

Reference 1
Microplastics Waste and Its Eco-Friendly Management
Chandravanshi S., Sahu A., Lal J., (...), Chandran S.
Advanced Strategies for Biodegradation of Plastic Polymers ↗
2024

Reference 2
Distribution and importance of microplastics in the marine environmentA review of the sources, fate, effects, and potential solutions
Auta H.S., Emenike C.U., Fauziah S.H.
Environment International ↗ 2017

Reference 3
Understanding microplastic pollution of marine ecosystem: a review
Sharma S., Bhardwaj A., Thakur M., Saini A.
Environmental Science and Pollution Research ↗
2024

Show all 15 references

Minimize uncertainty with transparent evidence and adaptive queries

When evidence is limited, researchers face uncertainty. Scopus AI mitigates this with strict engineering prompts to ensure transparency, and if insufficient evidence is detected, it proactively suggests alternative queries. This approach prevents dead ends, saves effort, and promotes confident decision-making grounded in clear, reliable insights.

Foundational documents

9,449 citations

Plastic waste inputs from land into the ocean

J.R., Jambeck, Jenna R.,
R., Geyer, Roland, C.V., Wilcox, Chris V.,
(...), K.L., Lavender, Kara L.
Science New York N Y ↗ 2015

6,164 citations

Microplastics in the marine environment

A.L., Andrady, Anthony L.

Show more documents

Accelerate learning with guided questions and key literature

Breaking into new research areas can be overwhelming. Scopus AI helps by suggesting "Go deeper" questions and surfacing high-impact foundational papers—those most cited in relevant summaries—so researchers can rapidly build expertise. This targeted approach streamlines knowledge acquisition and expedites impactful discoveries.

What impact do microplastic pollutants have on marine biodiversity in coastal regions? •••

requires comprehensive mitigation strategies, including reducing plastic waste, improving waste management practices, and enhancing public awareness and policy measures [5] [10] [11].

Show more documents

Expanded summary ⌄

Insights at a glance

[🗺 Concept Map]　[👥 Topic Experts]　[💡 Emerging Themes]

Go deeper

↪ How do microplastic pollutants affect the feeding habits of marine organisms in coastal regions?

↪ What are the potential long-term consequences of microplastic pollution on the genetic diversity of marine species in coastal areas?

↪ How do microplastic pollutants impact the reproductive success of marine organisms in coastal ecosystems?

Expand horizons with interactive concept maps

Understanding complex research landscapes is challenging. Scopus AI's interactive concept maps visually cluster keywords from abstracts, offering a bird's-eye view of related research areas. This visualization reveals novel connections and collaboration opportunities beyond your current focus, opening new avenues for innovation.

Spot emerging trends before they go mainstream

Staying ahead of the curve means identifying rising research themes early. Scopus AI's Emerging Themes feature categorizes established, emerging, and novel topics, providing mini-summaries, references, and hypotheses. This enables proactive research planning, helping you target impactful publication and funding opportunities before trends become mainstream.

Deep Research on Scopus AI

Elsevier's most recent AI innovation is now available on Scopus AI: Deep Research.

Designed to amplify thinking, not replace it, Deep Research uses agentic AI to deliver comprehensive, well-reasoned reports in minutes, saving researchers hours or even days of preliminary work. More than a literature review, Deep Research reports are designed to support and stimulate the thinking process offering multiple perspectives, ideas and suggestions that act as a springboard for further exploration.

According to Adrian Raudaschl, Principal Product Manager at Elsevier, Deep Research was developed in response to a user desire for more and deeper insights.

He explains: "Since the launch of Scopus AI, one of the most popular elements of its response has been the automatically generated Go deeper questions.

So, in April 2025, we released Conversational Follow-Up, enabling users to pose their own additional questions. But what we soon noticed is that up to half of the Conversational Follow-Up questions people asked weren't related to their original query. Instead, they wanted to explore beyond the borders of that topic or reinterpret the information. And these were questions that Scopus AI couldn't easily answer. With Deep Research that has changed. In fact, we've been asking some of our partners in life sciences to think of really hard questions we can test it with, and the results have been incredibly powerful."

Anatomy of a Deep Research Report

Natural language question

Explore topics and discover relevant references since 2003

What are the long-term cognitive and behavioral effects of AI-generated educational feedback on middle-school students' learning outcomes?

⬤ Deep research   →

Referenced overview of key findings

Theme/Outcome	Summary of Findings	Citations
Cognitive Effects	Personalized, hybrid AI feedback enhances critical thinking, problem-solving, and knowledge retention; effects vary by modality and student digital literacy.	[1] [2] [3] [4] [5] [6]
Behavioral Effects	AI feedback increases motivation, engagement, and self-regulation, especially when emotionally scaffolded and teacher-integrated.	[7] [8] [9] [10] [11]

Direct answer to query

The long-term effects of AI-generated educational feedback on middle-school students' learning outcomes are multifaceted. Personalized AI feedback, especially within hybrid frameworks that include significant teacher oversight, enhances cognitive abilities such as critical thinking and problem-solving, and promotes behavioral benefits like increased motivation, engagement, and self-regulation. The effectiveness of these impacts depends on feedback modality, emotional scaffolding, and student digital literacy. However, robust longitudinal evidence is limited, particularly for middle school, highlighting the need for extended mixed-method studies to address evolving teacher practices, ethical concerns, and sustained student benefits.

Study scope

- **Time Period:** Most studies span 1–2 academic terms; few extend beyond a year.
- **Disciplines:** Focus on STEM, language arts, and general middle-school curricula.
- **Methods:** Meta-analyses, quasi-experimental, mixed-method, and case studies; limited longitudinal research.
- **Populations:** Primarily middle-school students (ages 11–14), with some studies including teacher perspectives.

Assumption & limitations	• **Assumptions:** AI feedback is implemented with teacher oversight; students have baseline digital literacy; ethical frameworks are considered. • **Limitations:** ○ Scarcity of long-term, middle-school-specific studies. ○ Potential publication bias toward positive outcomes. ○ Variability in AI system quality and teacher integration. ○ Limited demographic diversity in some samples.
Suggested further research	• Conduct multi-year, mixed-method longitudinal studies focused on middle-school populations. • Investigate adaptive AI systems that dynamically adjust feedback modalities based on real-time student data. • Explore differentiated instructional strategies to address demographic and digital literacy
Main body	The integration of AI-generated feedback in middle-school education has accelerated with advances in generative AI and large language models, offering real-time, personalized, and scalable feedback to students `9` `14` `15`. This shift promises to address persistent challenges in education, such as providing timely, individualized support and fostering self-regulated learning. However, the long-term cognitive and behavioral effects of such feedback—especially in the formative middle-school years—remain underexplored. Understanding these effects is crucial for optimizing AI's role in supporting diverse learners and ensuring equitable, sustainable educational outcomes `9` `14` `15`.
Synthesis paragraph	AI-generated feedback is most effective when personalized, context-aware, and combined with teacher mediation. Its impact varies by subject and student demographics, necessitating flexible, inclusive, and ethically guided implementation `1` `2` `23`.
Conclusion and recommedations	Voice-based emotion recognition systems can substantially improve diagnostic accuracy and patient trust in remote mental health care when integrated with robust, ethical, and culturally sensitive frameworks. Continued innovation in feature extraction, multimodal fusion, explainability, and clinical validation will be key to overcoming current limitations and realizing the full potential of these technologies in global mental health practice.

Scopus AI draws on trusted, peer-reviewed content indexed in Scopus.

The Scopus Content Selection and Advisory Board (CSAB) is an international group of scientists, researchers and information professionals who represent the major scientific disciplines. Year-round, the board members are responsible for reviewing all titles that are suggested to Scopus. The CSAB is comprised of 17 Subject Chairs, each representing a specific subject field. The Board works with the Scopus team to understand how Scopus is used, what content is relevant for users and what enhancements should be made. The recommendations of the CSAB directly influence the overall direction of Scopus and the prioritization of new content requests to ensure that Scopus content stays international and relevant.

Explore more – your journey to responsible AI begins today.

Insights from extensive user testing

AI tools should be built with the research community, for the research community. Researchers and libraries are integral to understanding their needs and concerns, ensuring we provide reliable, mission-critical insights.

User testing and feedback are vital to creating effective, purpose-driven AI tools like Scopus AI. By engaging directly with researchers—through hundreds of interviews, surveys, and in-product feedback, Elsevier ensures its AI solutions address real-world needs, such as simplifying complex searches, improving query formulation, and enhancing output accuracy. Continuous user insights reveal how researchers interact with the tools, what challenges they face, and what features truly add value. Regular cycles of testing, analysis, and iteration allow the product team to adapt quickly, prioritize improvements, and build trust. Ultimately, this user-centric approach ensures that Elsevier's AI innovations are not only cutting-edge but also highly relevant and useful to researchers in their daily work.

> *"Scopus AI's concept maps helped me see connections between climate science and public health I hadn't considered before."*
>
> Early-career researcher (user feedback)

Your pivotal role in the *era of AI*

Standing at the forefront of the research community's transition into the AI era are libraries. As trusted stewards of knowledge and digital literacy experts, you are uniquely positioned to guide researchers, educators, and students through the complexities of adopting AI-powered tools responsibly.

Libraries are always in the spotlight as advocates for stakeholders, helping provide urgent support and guidance, especially with widely adopted technologies like AI. With AI reshaping how information is discovered, synthesized, and used, your expertise is critical to ensuring these technologies are integrated ethically, transparently, and effectively.

Our Insights 2024: Attitudes toward AI survey highlights that while awareness of AI is high, many users lack confidence in the accuracy and trustworthiness of AI-generated content. Libraries have been quick to bridge this gap by fostering AI literacy, advocating for responsible AI use, and supporting institutional policies that safeguard research integrity and data privacy.

AI is reshaping the research landscape at an unprecedented pace. Nearly all researchers and clinicians we surveyed expect AI to accelerate knowledge discovery, increase research volume, and transform education within the next two to five years.

AI can dramatically reduce the time spent on literature reviews, data synthesis, and administrative tasks, freeing researchers to focus on high-value activities that drive innovation and societal progress.

Tools like Scopus AI, powered by advanced technologies such as RAG Fusion and vector search, enable users to explore complex topics with depth and nuance, uncover emerging themes, and identify new research gaps and collaborators.

> *"Emerging themes helped me identify a new direction for my dissertation—something I would have missed with traditional search."*
>
> Doctoral student (user feedback)

The time is now. You have a unique opportunity to strengthen your role as essential partners in research and learning by evaluating and integrating AI tools that help your stakeholders enhance efficiency, insight, and impact.

Explore more – your journey to responsible AI begins today.

Practical guidance for responsible *AI adoption and advocacy*

Lead responsible AI adoption and advocacy from your library

Libraries are already positioned to lead the responsible adoption and use of AI. With expertise in information curation, evaluation, and digital literacy, help your communities navigate the complexities of AI-powered tools while championing integrity, reliability, and replicability. As impact makers in your own right, build confidence in research and education with mission-critical guidance and insights embedded in trusted content.

Foster AI literacy and critical evaluation skills

The foundational step in promoting AI literacy involves demystifying AI technologies, explaining their capabilities and limitations, and equipping your users with critical evaluation skills to assess AI-generated content. Embedding AI literacy into workshops, guides, and consultations, support your students, faculty, and researchers to use AI tools responsibly and effectively, and reduce risks of misinformation and bias.

Evaluate and select trusted AI tools

Libraries are now taking on a crucial role in identifying and vetting AI tools that align with institutional values and policies. Given the proliferation of AI tools, it is essential to ask key questions about a tool's data sources, transparency, bias mitigation, privacy safeguards, and ease of integration into existing workflows. Tools like Elsevier's Scopus AI and ScienceDirect AI exemplify responsible AI design by grounding outputs in peer-reviewed, curated content, providing transparent citations, and adhering to strict privacy principles.

Shape institutional AI policies and governance

As AI adoption grows, institutions are developing policies to govern its ethical and effective use. Contribute your expertise to interdisciplinary task forces and policy committees, helping craft guidelines that address academic integrity, data privacy, accessibility, and equitable access to AI technologies.

By collaborating with academic leadership, ensure that AI governance frameworks reflect the needs and concerns of the research and learning communities, fostering trust and accountability.

Promote human oversight and ethical AI use

While AI tools offer powerful capabilities, human expertise remains essential. Champion the principle that AI should augment, not replace, human thinking. Establish clear procedures for human oversight of AI-powered services, train staff to assist users in interpreting AI outputs, and encourage critical thinking to identify potential hallucinations or bias.

This human-centered approach helps maintain the integrity and quality of academic work.

Continue advocating for privacy, inclusion, and sustainability

By prioritizing user privacy and robust data governance in all AI initiatives, you are continuing to ensure compliance with regulations such as GDPR and institutional policies. Build inclusive AI practices into your existing frameworks to address bias and promote diverse representation in training data and AI outputs.

Develop educational awareness of the environmental impact of AI technologies and support sustainable practices, such as optimizing computational resources and selecting energy-efficient solutions.

The rapidly evolving AI landscape calls for ongoing education and collaboration. Establish and grow communities of practice to share knowledge, experiences, and best practices related to AI, especially across different subject areas where use and adoption varies. Foster peer learning, support innovation, and help your institution stay abreast of emerging trends and challenges.

Build on your library value as trusted AI advisors and educators and indispensable partners in advancing human progress through responsible AI adoption.

Explore our GenAI Buyer Guide, complete with 15 questions to ask when evaluating AI tools.

Stay ahead: *Advance human progress through trusted AI tools*

Meet the evolving needs at your institution

Researchers and students today face unprecedented challenges: information overload, accelerating research output, and the need for rapid, reliable insights to drive forward innovation and improve outcomes. AI offers transformative potential to address these challenges by delivering integral insights to build confidence and enhance productivity. Our Insights 2024: Attitudes toward AI survey shows that nearly all researchers and clinicians expect AI to accelerate knowledge discovery and increase the volume of scholarly and medical research. They also emphasize the importance of transparency, accuracy, and ethical use to build trust in AI tools.

Deliver mission-critical insights with integrity and reliability

We know how important research integrity is with reliable and trusted research. Grounded in trusted, high-quality content, our AI-powered tools, such as Scopus AI and ScienceDirect AI, are designed to deliver reliable, verifiable insights by leveraging peer-reviewed, curated content. Ensure your users receive information they can trust, supporting integrity, reliability, and replicability in research and decision-making. For example, Scopus AI uses advanced technologies like RAG Fusion to synthesize comprehensive, nuanced responses from authoritative sources. It transparently cites its references, enabling users to trace every claim back to its origin. This approach mitigates risks of hallucinations and bias, helping researchers and clinicians make informed decisions faster.

Enhance efficiency and impact through innovation and sustainable practices

AI tools dramatically reduce the time spent on literature reviews, data synthesis, and administrative tasks, freeing researchers to focus on higher-value activities. As a technology provider, we are committed to responsible AI development. Our innovations are built with a people-first approach, prioritizing user privacy, data governance, and human oversight. Our solutions comply with global regulations like GDPR and adhere to strict privacy principles, ensuring that user data is handled securely and ethically.

We recognize that advancing human progress requires championing inclusion and sustainability. Our responsible AI principles guide us to prevent unfair bias, promote transparency, and foster equitable access to AI technologies. We also actively seek to minimize the environmental impact of AI by optimizing computational resources and adopting energy-efficient practices. We continuously incorporate user feedback, ensuring that our AI solutions evolve responsibly, meeting the diverse needs of researchers, students, and libraries worldwide.

Our vision is to empower impact makers, researchers, educators, and libraries, to succeed. Through trusted content, innovative technology, and a commitment to responsible AI, we support the community in advancing knowledge and improving outcomes. Together, we can harness the power of AI responsibly to accelerate discovery, foster collaboration, and drive meaningful impact for society.

Lessons learned from *the community*

We work with libraries from across the community. Discover some key insights from the library at Warsaw University of Life Sciences (SGGW) in implementing AI-enhanced research tools:

Be proactive leaders and testbeds.

The SGGW Library led by proactively requesting beta access to Scopus AI, evaluated its potential and set an example for responsible, evidence-based adoption. This also meant they identified early adopters and practical use cases, using surveys to understand needs and experiences. Rather than waiting for ideal policies or full institutional consensus, start exploring AI by pilot testing tools, gathering feedback, and sharing results. Take an experimental, user-centered approach and launch pilots and trials with clear communication, gather feedback to understand real-world impact, and let organic adoption and feedback steer rollout and advocacy. Set the pace for your institution and demonstrate leadership in digital transformation.

Improve literature review and literacy.

SGGW researchers found Scopus AI especially valuable for accelerating literature reviews and reducing irrelevant results. The tool's ability to admit when it doesn't know something (rather than hallucinating) was seen as a major advantage over general-purpose LLMs.

"Scopus AI made my literature review process faster and less frustrating. It surfaces fewer irrelevant articles and is transparent about its limitations."

"AI tools can make research more enjoyable and encourage deeper, more creative inquiry."

Enhance teaching and critical AI literacy.

The SGGW Library integrated GenAI tools into teaching, but always with a critical lens, encouraging students to understand both the benefits and the limitations of LLMs and to ground their work in peer-reviewed sources. Emphasize the importance of teaching AI literacy as a core information literacy skill and encourage students and researchers to use AI tools for idea generation and structuring arguments, but not as a replacement for their own thinking or writing. Use AI's limitations as "teachable moments" for critical evaluation and source verification.

Be AI governance and reflection hubs.

The SGGW Library expanded their role to include AI governance, policy development, and created spaces for critical reflection and knowledge-sharing about AI's role in research. Position your library as a hub for responsible AI adoption, policy guidance, and ongoing professional development. Offer workshops, share practical experiences, and facilitate campus-wide discussions on AI's opportunities and risks. Build expertise not just in tools, but in the workflows and ethical frameworks that underpin responsible AI use.

Demonstrate real-world impact and stakeholder buy-in.

The SGGW Library's pilot and survey approach helped secure stakeholder support for acquiring Scopus AI, showing that real-world data and user stories are powerful tools for building consensus and driving adoption. Document and share evidenced impact stories, usage data, and researcher testimonials to build support among decision-makers and funders.

> *"Scopus AI made my literature review process faster and less frustrating. It surfaces fewer irrelevant articles and is transparent about its limitations."*
>
> Doctoral student (user feedback)

> *"AI tools can make research more enjoyable and encourage deeper, more creative inquiry."*
>
> Doctoral student (user feedback)

Lead the future of research with confidence

In an era where AI is transforming research discovery and knowledge synthesis, your institution has a critical role in shaping responsible, impactful innovation. AI is moving at a speed unlike anything we've seen before and institutions that adopt responsible, innovative AI solutions can help shape the future of discovery and uphold the integrity of scholarly work.

As Don Simmons, Assistant Professor at Simmons University's School of Library and Information Science commented in a recent Library Connect article: "Whether you perceive AI as a good or bad thing, it offers an opportunity to amplify our profession, so that we not only remain relevant, but become the source to go to when anyone wants to learn more about AI navigation and AI literacy."

Scopus AI is more than a trusted, ethically designed platform, it's a strategic advantage.

Grounded in peer-reviewed content and guided by responsible AI principles, it empowers your university to accelerate insights, foster meaningful collaborations, and build trust in your research community.

Elsevier is a leading AI solution provider you can trust to innovate alongside the research community.

Choosing Scopus AI for your institution means equipping your users to navigate the AI revolution with clarity, confidence, and purpose. Discover how Scopus AI can become your strategic partner in advancing human progress and maintaining your leadership in academic excellence.

The broader research ecosystem is moving forward and the time to act is now. Discover how Scopus AI can be your catalyst for impactful, ethical innovation.

Request a Scopus AI trial today.

Additional resources

Elsevier Report - Insights 2024: Attitudes toward AI

Researcher of the Future: A Confidence in Research report

Elsevier's GenAI Literacy Program

Elsevier's GenAI Buyer Guide

Agentic AI Buyer Guide

AI Literacy checklist

Rising to the challenge: library leaders share their top strategies for AI literacy education