Description

Whether we like it or not, AI is now deeply embedded in our daily lives. It is increasingly transforming the way we interact, live, work, study, and teach. It is no longer a futuristic concept, but very much a reality that shapes the way we conduct research, learn, write, and publish. Tools such as Grammarly, Scite, and ChatGPT are now widely used by researchers to generate hypotheses, draft manuscripts, synthesize literature, and so on. Many scholars promote the use of these tools as they appear to streamline a lot of tasks, making the process more efficient and faster.

However, as AI tools and technologies continue to advance, the current AI models bring to light a serious question. While AI tools open the doors for some researchers, their use also risks closing many doors for other underprivileged students unable to afford advanced, paid models. The growing integration of AI in academic research and publishing poses a serious question:

> *Are AI tools and technologies revolutionizing academia, enhancing equity and accessibility, or are they worsening the digital divide?*

Currently, we see a growing adoption of AI in research, writing, and education, as evidenced by the 2024 study examining the AI Landscape Study by Educause. But while some students benefit from these tools, others risk exclusion due to cost, accessibility problems, infrastructure, or bias. Here, we take a deeper dive into whether AI is enhancing equity and inclusion or worsening the digital divide.

Additionally, this article explores solutions to tackle the current challenges the academic world faces due to a rise in the use of AI tools and technologies. Moreover, we take a deep dive to explore how we can use these tools to foster equity and inclusion.

What is the Digital Divide in the AI Era?

The digital divide has existed long before AI came into being. According to Moore & Vitale, it refers to the unequal access to digital technologies, infrastructure, internet connectivity, and digital literacy. It highlights that some privileged members of society have easy access to said digital technologies and know how to use them, while others don't. In the early 2000s, the term digital divide meant that people in some parts of the world had access to computers and the internet, and some didn't. Before that, it was radio, television, fax machines, typewriters, and so on.

Today, the technological innovation driving the divide is AI tools and technologies. However, the rise of AI has created new dimensions to this divide. You no longer just need access; you need access to the more advanced, high-performing tools (paid versions), digital infrastructure, and training to use these tools responsibly.

While the digital divide seems like a simple enough concept, many underlying complexities contribute to the divide and are often exacerbated because of it. Thus, starting a vicious cycle that keeps the underprivileged worse off than before the introduction of certain digital technologies. This divide plays across three interconnected dimensions, namely: access, usage, and outcomes.

Access Divide

Access is the most visible layer, reflecting inequalities in infrastructure and resources. These include, but aren't limited to:

- Urban vs rural – Remote regions, especially in developing countries, lack reliable internet and access to critical digital infrastructure, while rural areas, even in wealthier nations, face slower speeds and higher costs.
- Economic barriers – Devices and internet plans remain unaffordable for many low-income households.
- Electricity – Inconsistent power supply in parts of Africa, South Asia, and Latin America limits device use.
- Gender inequality – In some societies, women are less likely to own devices or access the internet, reinforcing exclusion.

Usage Divide

Having access does not guarantee effective use. That is heavily dependent on skills, education, and cultural norms. Here are just some points that matter when it comes to ensuring equity when it comes to usage of digital technologies:

- Digital literacy – Many lack the ability to navigate online tools, particularly older adults.
- Education – Underserved schools without digital resources leave students behind.
- Language & culture – Most online content is in English, creating barriers for non-English speakers.
- Fear & resistance – Distrust or intimidation toward technology, common among older or isolated groups, reduces engagement.

Outcome Divide

Even with access and skills, the benefits of technology are uneven. These are often aggravated due to several inequalities, such as:

- Economic – Wealthier regions gain more opportunities, while poorer ones fall further behind.
- Education – Students in connected areas excel through digital learning, widening gaps.
- Healthcare – Telemedicine and AI-driven care remain out of reach for many underserved communities.
- Social participation – As services move online, those excluded face growing marginalization in jobs, banking, and civic life.

Understanding the Barriers to Equitable AI Access in Academia

While artificial intelligence has the potential to transform research scholarship, its benefits are not distributed evenly across the global academic community. AI equity and inclusion in academia are shaped by economic infrastructure, linguistic, and cultural conditions that determine who can fully participate in this technological shift. Certain systematic biases embedded in AI models risk reinforcing existing academic inequalities rather than bridging them. Understanding these barriers is essential to ensure that AI serves as a tool for inclusion rather than deepening the digital divide.

Economic Barriers

The cost of AI tools is a significant hurdle. While some platforms are free, premium versions with advanced features, such as ChatGPT Plus, Scite Pro, or Grammarly Premium, often come with monthly fees. Institutions in high-income countries may purchase enterprise licenses for their faculty and students, but universities in low and middle-income regions struggle to allocate such budgets. This economic barrier directly limits who can benefit from AI-assisted research.

Infrastructure Barriers

AI tools are often cloud-based, requiring fast, reliable internet connections and modern computing infrastructure. However, in many developing countries, internet speeds remain inconsistent, and power outages are frequent. Even if free AI platforms exist, researchers without stable access to electricity or broadband cannot fully benefit. This infrastructure gap reinforces global disparities.

Language Barriers

Most leading AI tools are optimized for English. While some platforms are beginning to support other languages, English remains dominant in training data, academic resources, and publishing. Non-native English-speaking scholars often rely on AI for translation or editing, but the tools can produce inaccurate or overly simplified results. This not only risks miscommunication but also perpetuates English-language dominance in academic publishing, sidelining non-English contributions.

Skills Gaps

Another critical issue is AI literacy. Many researchers lack training on how to use AI responsibly. These are skills reserved for those who study technical programs, such as a software development or an AI degree, even though these are essential skills to have, even for those enrolled in professional writing p

rograms or technical communications.

For instance, knowing how to engineer prompts effectively or validate AI-generated references requires practice and awareness. While many universities in more developed parts of the world are increasingly offering AI workshops, those in resource-limited regions lack formal AI training programs. As a result, some researchers can strategically use AI to accelerate research, while others remain unaware of its capabilities.

Bias in AI Systems

Even when accessible, AI systems themselves are not free from bias. Large language models are trained predominantly on Western knowledge sources, meaning perspectives from the Global South, indigenous knowledge, or non-Western journals may be underrepresented. This bias can influence the suggestions AI provides, reinforcing stereotypes or excluding variable insights. For example, when asked for key literature on a topic, an AI system may highlight Western-authored studies while ignoring equally relevant research from Africa or Asia.

Consequences of an Unequal AI Landscape

While the adoption of AI technologies has been rapidly accelerating across all parts of society, there are significant concerns about its potential impact on inequality.

Academic Productivity Gap

Researchers with access to AI can draft articles faster, refine their writing, and analyze datasets more efficiently, especially those with access to paid versions. Those without access face longer timelines, delayed submissions, and missed opportunities. Over time, this creates a widening productivity gap between AI-assisted and non-assisted scholars.

Publication and Recognition Disparity

Journals and reviewers may indirectly favor AI-polished manuscripts. Well-written submissions stand a better chance of acceptance, regardless of the underlying research quality. Scholars without AI assistance may find their work rejected or overlooked due to less-refined writing.

Global Knowledge Imbalance

If AI reinforces Western publishing dominance, the global academic conversation risks becoming even more one-sided. Scholars in underrepresented regions may find it harder to have their work recognized, contributing to a cycle where certain voices dominate and others are marginalized.

Ethical and Social Costs

Unequal AI adoption can foster mistrust. If AI use is opaque, scholars may face accusations of misconduct, or “AI overuse”. This raises the question of whether AI is writing the essay, and who is learning the lesson? Meanwhile, those without AI may feel disadvantaged, creating resentment. Ethical concerns about transparency, authorship, and academic integrity further complicate the situation.

What is the Current AI Landscape and its Usage in Academic Writing Like?

Currently, the integration of AI tools and technologies in academic writing, research, and publishing is relatively new and something that scholars are still trying to navigate and effectively integrate. There are many ethical concerns over its usage and the subsequent inequalities it gives rise to.

For example, access to advanced AI writing platforms remains behind paywalls. A researcher in Kenya may rely on the free version of ChatGPT, which limits usage, while peers in Europe access premium versions. Moreover, premium generative AI models, though not inherently better at avoiding AI detectors, do have the upper hand when compared to free versions.

These versions feature a more sophisticated underlying language model, faster response times, and access to more advanced services such as image and video generation. Additionally, several universities across the US and Europe now integrate AI literacy into their curricula. However, universities in South Asia, Africa, or developing parts of the world lack structured AI education programs, leaving students unprepared to compete globally.

On the bright side, UNESCO has launched an AI literacy initiative to promote responsible AI use in education globally. These programs aim to equip teachers and students with the skills to use AI effectively, especially in developing regions.

How can we Work towards an Inclusive AI in Academia?

Addressing the many challenges, the use of AI tools and technologies in academia requires a multiphased approach. According to research titled “Artificial Intelligence and Inequality: Challenges and Opportunities“, the first step is to identify the challenges. The second step is to identify the opportunities and find ways to work around the challenges. Centering equity, social justice, and human welfare in AI design and deployment enables us to leverage its transformative potential for a more inclusive and just society.

Policy and Institutional Support

Universities and research organizations should advocate for fair AI access policies. Subsidized institutional licenses, especially for universities in developing countries, could help level the playing field. Journals, too, must adopt consistent policies on AI use to prevent penalizing researchers unfairly, as the majority of AI detectors continue to flag a significant part of human-generated content as AI-generated.

Open-source and Low-cost AI Solutions

The academic community should promote open-source AI platforms. Tools hosted by communities like Hugging Face are crucial for democratizing access. Importantly, such solutions should prioritize multilingual support so that non-English-speaking scholars benefit equally.

Capacity Building and Training

AI literacy should become a core academic skill. Institutions can organize workshops, webinars, and collaborative courses to teach responsible AI use. International partnerships, such as mentorship programs pairing Global North and South institutions, could help bridge skills gaps.

Ethical AI Development

Ethical AI development is a key consideration that all developers must prioritize. This includes ensuring inclusivity in training datasets. Incorporating diverse cultural, linguistic, and regional sources will reduce systemic bias in AI outputs. Ethical guidelines for AI in research should also mandate transparency and disclosure to build trust.

Collaborative Global Efforts

Equity in AI cannot be achieved in isolation. Organizations like UNESCO, OECD, and International Research Consortium must work toward global standards for AI integration. North-South partnerships, where wealthier institutions support resource-limited ones, can help create a more balanced ecosystem.

AI has the Potential to Bridge the Digital Divide in Academia – If leveraged right!

AI has the power to revolutionize academia, but its benefits are not equally distributed. Economic, infrastructural, linguistic, and skill-based barriers risk deepening the digital divide. If left unchecked, AI could entrench existing inequalities, favoring already-privileged researchers while excluding marginalized voices.

However, with thoughtful policies, inclusive development, and collaborative global action, AI can become a tool for empowerment. By addressing inequities head-on, academia can ensure that AI strengthens, not weakens, the diversity of global scholarship. The challenge of AI integration in academia is very clear. Will AI be a force for inclusion, or will it worsen the divide? The answer depends on the collective choices of policymakers, institutions, and researchers today.

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Category

1. AI in Academia

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