CloudPublish

AI and Peer Review: Transforming Editorial Workflows in eJournals

Academic publishing is under unprecedented strain. As submissions continue to grow, the demand on reviewers intensifies, and editorial teams find themselves stretched thinner than ever. The peer review process—once the cornerstone of scholarly integrity—is now presenting some of the greatest challenges in the publishing cycle.

Today, the average time to receive a 'first decision' in peer-reviewed journals exceeds 2–3 months. This delay frustrates authors racing against career milestones, funding deadlines, and institutional expectations. An editorial director at a mid-tier science journal recently admitted, "The bottleneck is real. We're chasing reviewers more than we're reviewing manuscripts."

Many journals still rely on fragmented systems, manual workflows, and outdated tools to manage peer review. This results in editors spending more time on administrative tasks than on meaningful editorial work. Meanwhile, authors wait months for initial feedback, reviewers face burnout, and the scholarly community misses out on timely research advancements.

It's clear: change is urgently needed.

At CloudPublish, we believe the solution isn't about replacing human expertise—it's about empowering it. The key lies in providing editors and reviewers with smarter, more efficient tools. By integrating intelligent automation with flexible workflows, we can give editorial teams greater control and reduce unnecessary burdens.

What Do We Mean by 'AI' in Editorial Workflows?

When we talk about "AI in publishing," we're not envisioning robots making acceptance decisions—peer review is and always should be a human-driven process. Instead, AI acts as a powerful assistant, streamlining the parts of the workflow that slow everything down. These deployable tools leverage narrow AI technologies such as natural language processing (NLP) and machine learning (ML) to augment, not replace, editorial judgment.

By harnessing these innovations, we can accelerate review timelines, reduce reviewer fatigue, and ensure that vital research reaches the community more swiftly—all while maintaining the integrity and quality that define scholarly publishing.

The future of academic publishing is collaborative—between humans and intelligent tools. Together, we can build a more efficient, equitable, and timely scholarly communication ecosystem.

1. NLP-Based Tools (Language Enhancement)

Language editing tools like Writefull, Grammarly Business, and Paperpal use NLP to improve grammar, style, and clarity. They're especially valuable for authors writing in a second language, leveling the field while improving readability.

2. ML Algorithms (Plagiarism & Similarity Detection)

Tools like iThenticate and Turnitin can scan manuscripts against millions of sources to detect overlap and potential plagiarism, enabling editors to address issues before peer review begins.

3. Decision-Support Systems (Reviewer Recommendations & Triage)

Reviewer matchmakers like ScholarOne Reviewer Locator and Meta Science analyze submission topics and citation networks to suggest qualified reviewers. Other AI systems help desk editors identify manuscripts that should be fast-tracked or rejected early.

"Tools like iThenticate (for similarity) and Scite.ai (for citation context) are becoming embedded in editorial pipelines."

Four Ways AI is Supporting Editors (Not Replacing Them)

1. Plagiarism and Similarity Checks

Before any manuscript goes out for review, it needs to be checked for originality. Tools like iThenticate or Turnitin compare the manuscript against a huge database of published material. These tools are already widely used in publishing and can flag overlap in seconds.

But tools alone don't make decisions. Editors still review the reports and decide what's acceptable reuse and what crosses the line.

2. Language Improvement and Readability

Not every author writes in perfect English. For many, it's a second language. But that shouldn't get in the way of sharing good research.

Language tools like Writefull or Paperpal help authors improve grammar, clarity, and tone before the manuscript even reaches the editor. This means fewer delays caused by back-and-forth revisions and a more level playing field for international researchers.

NLP-based tools integrated into our end-to-end journal publishing platform help improve grammar, clarity, and tone before editors even step in. Editors can request language improvements with a click, or offer language support during submission without slowing down the workflow.

3. Reviewer Recommendations

One of the most time-consuming parts of peer review is finding the right reviewers. Because, editors often rely on personal contacts, spreadsheets, or outdated databases.

However, AI can help by scanning the manuscript content and suggesting reviewers based on topic match, prior publications, or network connections. These are suggestions, not final decisions, here editors still choose who to invite.

4. Submission Triage and Early Filtering

Not every manuscript needs to go through full peer review. Some are out of scope. Others don't meet basic requirements.

AI tools can help by highlighting red flags early. This might include missing metadata, ethical concerns, or lack of novelty. They don't make the decision to reject. They simply help editors assess more efficiently.

What About Ethics, Bias, and Transparency?

Bias in AI Recommendations

If reviewer suggestion tools rely heavily on prior citations or institutional prestige, they may skew toward elite researchers perpetuating systemic bias.

Over-Reliance on AI

We believe AI should inform, not override editorial judgment. "AI said it's not plagiarized" is no substitute for an experienced editor's review of flagged passages.

Transparency with Authors & Reviewers

Authors deserve to know if their work was analyzed by an AI tool. Journals can disclose AI involvement in guidelines or editorial decision letters to uphold trust.

Data Privacy & Confidentiality

Uploading manuscripts to third-party tools raises confidentiality risks. CloudPublish is built to comply with GDPR and offers secure, permission-based integrations that never compromise author data. As COPE advises, "AI must not compromise the integrity or confidentiality of peer review." Human accountability must always remain central.

The Future of Editorial Decision-Making

AI doesn't replace editorial expertise, it enhances it. It is actually an ever-alert assistant that handles repetitive tasks so editors can focus on high-value decisions.

Practical Takeaways for Academic Publishers

AI is already here and it's working. The key is to adopt it thoughtfully.

Actionable Next Steps:

- Start small: Pilot AI for plagiarism or reviewer suggestions
- Train your editors: Help them interpret AI reports, not follow them blindly
- Disclose AI use: Build transparency and trust with authors and reviewers
- Use the right platform: Choose one that's modular, secure, and built for AI

Don't wait until you're overwhelmed. Future-ready publishers are already seeing faster review times, fewer bottlenecks, and happier editorial teams.

Book a Demo

Phone……………………………………………………..+44 203 0313 866

Mail………..……………………….sabineguerry@cloudpublish.co.uk

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