The Revolutionary Advent of AI in Research and Publishing: A Global Study

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Introduction:

- AI and machine learning have transformed several industries over the past decade, facilitating easier and faster automation of several processes.
- In the academic publishing industry, AI-based technologies are being developed and implemented to assist both authors and publishers in tackling issues related to peer review, searching published content, detecting plagiarism, identifying data fabrication, automated text analysis, content translation, content personalization, SEO, chatbots, etc.
- However, there are many challenges associated with its adoption.
- To understand the influence of AI on the global publishing landscape, a survey had been designed to capture the global response. Here, we aim to outline the challenges currently faced and suggest possible ways to support a smooth transition.

Methodology:

- The survey was released by Enago Academy in English.
- More than 350 respondents from 212 universities across 54 countries, representing diverse cultures, academic roles, and fields of research participated in the survey.
- Participants included researchers (early career and established), journal editors, and publishers from different fields such as biological and life sciences, medicine and health sciences, artificial intelligence, computer sciences, media communications, etc.
- The survey was conducted between August 27 and October 3, 2021.

Objectives:

Our primary aim was to understand the following:

- The general perception and awareness about AI.
- The adoption rate and popularity of AI-based tools in the scholarly community (researchers, editors, publishers, etc.).
- The perceived benefits and concerns related to the use of AI in academic publishing.
- If users appreciate the value that AI is delivering or are more concerned about the rise of AI.

Conclusion:

- Researchers, authors, editors, and publishers are already experimenting with AI tools to improve the current workflow and efficiency. Majority of the survey respondents opinionated that the academic publishing landscape will benefit from increased automation and AI.
- So, what's slowing down AI adoption? Two challenges: Scarcity of data and expertise. Majority of survey respondents have claimed that a major limitation to implementing AI is the lack of knowledge, trained in-house staff, and resources.
- Due to increasing demand for quality publication with higher peer review speed, AI will undoubtedly be used more commonly in academic publishing. Therefore, educating and creating awareness to ease the possible fears and hesitation, and to realize the promising benefits of AI is a necessity.

Results:

Awareness About Applications of AI in Academic Publishing

Figure 1: Understanding of the concepts of AI, machine learning, internet of things clustering, etc.
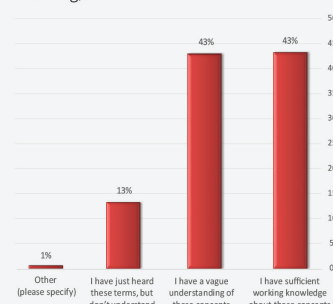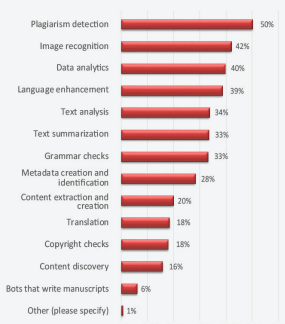
Figure 2: Different AI tools used by academics

What Do Academics Expect From AI?

Figure 5: AI assistance required by academics
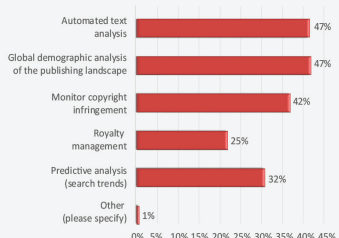
Figure 6: Expert advice on how to use AI to facilitate the publication journey

How Has AI Revolutionized Academic Publishing?

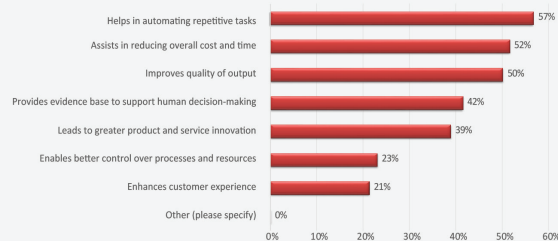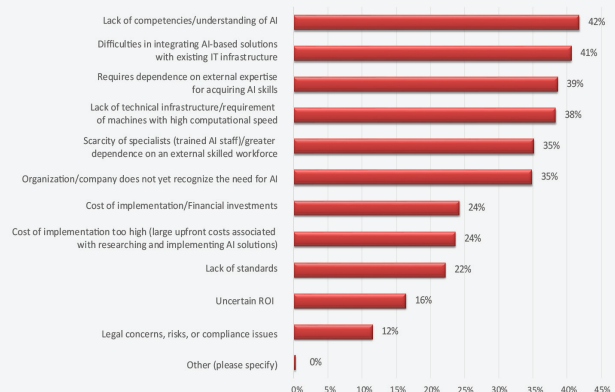**Figure 3:** Benefits of implementing AI in research and publishing

Figure 4: Key concerns associated with AI
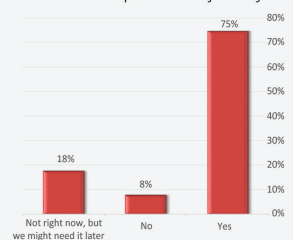
Key Observations:

1- Around 86% of respondents have sufficient working knowledge of AI or at least a basic understanding of AI and its concepts. On the other hand, 13% have heard but don't understand these concepts very well. The remaining 1% also mentioned that although they have theoretical understanding of the concept, they are yet to apply them in a working environment. *(Figure 1)*

2- Plagiarism detection rose to the pinnacle as the most known application, with about 50% of academics voting for it! *(Figure 2)*

3- Automation of repetitive tasks got the highest number of responses (57%) amongst all the other perceived benefits of AI, whereas enhancement of customer experience got lowest response with around 21% participants voting for it. *(Figure 3)*

4- Out of all the key concerns, respondents found that lack of competency to understand AI and difficulties in integrating AI-based solutions in existing IT infrastructure are the major obstacles in adopting AI. *(Figure 4)*

5- It is also determined that the academic community would require AI assistance majorly in global demographic analysis and to perform automated text analysis. *(Figure 5)*

6- The findings also suggest that 75% respondents need expert advice on how to successfully and effectively implement AI to ease their publication journey. Furthermore, about 18% mentioned that they might require AI assistance in the near future. These observations ascertain the need of AI in academic publishing. *(Figure 6)*

Future Study Prospects with Enago: While this survey's analysis confirms the need for AI in research and publishing, there is more to delve into how AI can bolster the publishing landscape in several disciplines. Enago Academy will strive to be at the forefront of such studies and urge thought leaders to get in touch with us via email at *academy@enago.com*.