From Ethical Issues to Practical Solutions: How AI Enhances Manuscript Preparation

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The integration of Artificial Intelligence (AI) in manuscript preparation has introduced significant advancements, including enhanced efficiency, improved error detection, and streamlined writing processes. However, this integration also brings forth various ethical concerns and challenges. This presentation will explore the transition from ethical issues to practical solutions in the use of AI for manuscript preparation. Key topics will include maintaining academic integrity, ensuring the ethical use of AI, and the importance of self-assessment in the research process. We will examine how AI can be leveraged responsibly to enhance the quality of academic manuscripts while addressing potential biases and ensuring transparency. Through case studies and practical examples, this session aims to provide researchers, authors, and publishers with actionable strategies to navigate the complexities of AI in academic publishing, ensuring that technological advancements complement rather than compromise the integrity of scholarly work.

1. Enhancements Brought by AI

Efficiency: AI tools can automate various aspects of manuscript preparation, saving time and effort for researchers and authors.

Error Detection: AI can identify and correct errors in grammar, punctuation, and formatting, ensuring higher quality manuscripts.

Streamlined Writing Processes: AI assists in organizing and structuring content, making the writing process smoother and more coherent.

2. Ethical Concerns

Academic Integrity: Ensuring that the use of AI does not compromise the originality and authenticity of the research.

Bias in AI: Addressing and mitigating biases that may be present in AI algorithms to prevent skewed or unfair outcomes.

Transparency: Maintaining transparency in the use of AI tools, including clear disclosure of AI assistance in manuscript preparation.

3. Practical Solutions

Maintaining Academic Integrity

Ensuring Ethical Use of AI

Self-Assessment in the Research Process:

3a. Maintaining Academic Integrity:

1

Authors must disclose the extent of AI assistance in their work.

2

Institutions should develop guidelines for the ethical use of AI in research and publishing.

3b. Ensuring Ethical Use of AI:

1 Implementing rigorous testing and validation of AI tools to identify and minimize biases.

2 Developing policies that outline acceptable and unacceptable uses of AI in manuscript preparation.

3c. Practical Self-Assessment in the Research Process: Solutions

1

Encouraging researchers to critically assess the influence of AI on their work.

2

Providing training on the ethical use of AI tools to ensure researchers are aware of potential pitfalls and best practices.

Ragam Penyimpangan Karya Ilmiah

1 Fabrikasi

"Menyajikan hal yang tidak ada"

Tiga macam: data, gambar, referensi

Tingkat	Data	Gambar/ Referensi
Ringan (100 poin)	1- 10%	1
Contoh: Menghilangkan data 10 dari 100 responden (falsifikasi10%)		
Sedang (200 poin)	11–20%	2
Contoh: Memunculkan/mengubah informasi yang tidak pernah ada dalam bentuk gambar (fabrikasi/falsifikasi)		
Berat (300 poin)	21-30% >30%	3 >3
Contoh: Memunculkan 3 atau lebih referensi yang tidak pernah ada		

2 Falsifikasi

"Mengubah untuk menipu"

3 Plagiat

"Menggunakan Karya yang sudah ada tanpa pengakuan secara memadai"

Tingkat	Plagiat
Ringan (0-10 poin)	<2 kalimat
Sedang (20-100 poin)	2-10 kalimat
110-250 poin	11-25 kalimat
Berat (260-300 poin)	≥ 26 kalimat
300	Karya dibeli

4 Kepengarangan tidak sah

"Menambah atau mengurangi nama pengarang secara tidak etis"

Tingkat	Kepengarangan tidak sah
Ringan (0 poin)	
Sedang (150 poin)	Menambahkan/ menghilangkan 1 orang
Berat (300 poin)	Menambahkan/ menghilangkan ≥ 2 orang

5 Konflik kepentingan

"Tidak mengakui adanya bantuan, keuntungan atau potensi keuntungan, dalam penelitian atau publikasi. "

Tingkat	Konflik Kepentingan
Ringan (0 poin)	
Sedang (100 poin)	Tidak mengakui 1 sumber dana (publikasi, sitasi, atau riset)
Berat (200-300 poin)	Tidak mengakui 2-3 sumber dana (publikasi, sitasi, dan/atau riset

6 Pengajuan jamak

"Publikasi berulang atas satu artikel yang sama"

Tingkat	Pengajuan jamak
Ringan (0 poin)	
Sedang (100 poin)	2
Berat (200-300 poin)	>3

Illustrations of some types of violations and their indicators (Siaputra & Santosa, 2023)

Ways in producing scientific work	Breach of the Truth	Violation of Fundamental values of Academic Integrity						Potential Risk
		Trust	Responsibility	Fairness	Courage	Respect	Honesty	
Types of Scientific Violations regulated in ministerial regulations								
Fabrication	***	***	**	**	*	**	***	**
Falsification	***	***	**	**	*	**	***	**
Plagiarism	*	***	*	*	*	*	***	*
Authorship	*	**	**	***	*	**	**	*
Conflict of interest	*	*	*	*	*	*	*	**
Multiple submission	*	***	**	***	*	**	**	*
Examples of behaviours that are not classified as misconduct but are questionable								
Self citation	*	*	*	***	*	**	*	*
AI-assisted paraphrasing	*	*	**	**	*	*	**	*
Computer as co-author	*	*	*	*	*	*	*	*

Symbols * = mild, ** = moderate, *** = severe

Reference:
Siaputra, I.B. & Santosa, D.A. (2023). Improving Academic Integrity in Indonesia: Proposed Recommendations for Managing Alleged Misconducts. In S.E. Eaton (Ed.), Handbook of Academic Integrity (2nd Ed.). Springer.

Case Studies and Practical Examples

Example 1: A researcher uses AI to automate the literature review process, enhancing efficiency while ensuring all sources are accurately cited.

Example 2: An AI tool identifies statistical errors in a manuscript, allowing the author to correct them before submission, thus improving the manuscript's quality.

Example 3: A publishing house implements an AI-driven plagiarism detection system that helps maintain the integrity of submitted manuscripts by identifying potential cases of misconduct.

Conclusion

- The integration of AI in manuscript preparation offers numerous benefits but also presents ethical challenges that must be addressed.

- By adopting practical solutions and maintaining a focus on academic integrity, researchers, authors, and publishers can leverage AI to enhance the quality of scholarly work.

- This session aims to provide actionable strategies and insights to navigate the ethical complexities of AI in academic publishing, ensuring that technological advancements support, rather than undermine, the integrity of scholarly work.