

Guidelines for the use and reporting of Artificial Intelligence in scientific- academic journals

Guía para uso y reporte de inteligencia artificial en revistas científico-académicas

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Abstract

Introduction. Artificial Intelligence (AI) proposes a restructured approach to the traditional methods of conducting and publishing scientific research since it provides tools that complement, re-learn, and simplify complex processes typically associated with human-driven research. The diversity of mechanisms AI provides requires transparent reporting of its use and the guarantee that they are consistent with the rigorous scientific communication and its editorial management ecosystem (comprised of editors, reviewers, and authors).

Objective. This document aims to provide guidelines for reporting the use of AI in activities related to the scientific publication process. The three roles mentioned above are equipped with concepts, principles, and recommendations that offer literacy and learning mechanisms for those individuals involved in activities related to knowledge communication. **Guidelines.** The guidelines are divided into four sections. The first section includes the concepts necessary to understand the dynamics proposed in the principles and recommendations. Notably, the definition of prompts (primary, second, and supplemental), the prompt net, and the diagrams conceptualizing their use are proposed. The second section covers editors and editorial teams and includes recommendations for implementing AI-related policies in their journals. The third section gives reviewers good practices for using AI to evaluate a scientific communication unit. The fourth section offers authors an ethical framework and concrete tools to use AI in their work and report it in their manuscripts. **Final reflection:** The ultimate goal for using AI must be the common good and the improvement of people's quality of life. An ethical exercise minimizing the introduction of bias or misinformation should be a backbone for using this tool. Future updates of these guidelines must never forget that this is an evolving phenomenon.

Keywords: Scientific publication; generative Artificial Intelligence; Large Language Model; prompt network; bias; open science; ethics.

SDG: SDG 4; Quality education.

Resumen

Introducción. La Inteligencia artificial (IA) propone una reestructuración de la forma tradicional de hacer y publicar ciencia, ya que aporta herramientas que complementan, reaprenden y simplifican procesos complejos propios de la investigación realizada por seres humanos. La diversidad de mecanismos que la IA provee, demandan transparencia al reportar su uso y garantía de que son congruentes con la rigurosidad de la comunicación científica y su ecosistema de gestión editorial (en el que participan personas editoras, revisoras y autoras).

Objetivo. El objetivo de este documento es facilitar elementos orientadores para el reporte de uso de la IA en las actividades que integran el proceso de publicación científica. Para ello se aportan conceptos, principios y recomendaciones para los tres roles ya mencionados que alfabetizan y proponen mecanismos de aprendizaje para las personas que se involucran

en las actividades de comunicación del conocimiento. **Guía.** Se proponen cuatro partes en la guía. La primera aporta el grupo de conceptos necesario para comprender las dinámicas propuestas en los principios y recomendaciones. En especial, se propone la definición de los prompts (primario, secundarios y complementarios); de la red de prompts (o prompt net) y se proponen los diagramas que conceptualizan su uso. La segunda cubre a las personas editoras y equipos editoriales y les propone recomendaciones para implementar políticas relacionadas con IA en sus revistas. La tercera le propone a las personas revisoras buenas prácticas para el uso de IA como apoyo al proceso de evaluar una unidad de comunicación científica. La cuarta le ofrece un marco ético y herramientas concretas a las personas autoras para usar IA en sus trabajos y reportarlo en sus escritos. **Reflexión final.** El fin último del uso de IA debe ser el bien común y la mejora de la calidad de vida de las personas. Un ejercicio ético, que mitigue la introducción de sesgos o la desinformación, debe ser un eje medular para el uso de esta herramienta. Tener presente que se trata de un fenómeno en evolución es relevante para futuras actualizaciones de la guía y sus conceptos.

Palabras claves: Publicación científica; inteligencia artificial generativa; modelo de lenguaje de gran escala; red de prompts; sesgo; ciencia abierta; ética.

ODS: ODS 4; Educación de calidad.

Resumo

Introdução. A Inteligência Artificial (IA) propõe uma reestruturação da forma tradicional de fazer e publicar ciência, pois fornece ferramentas que complementam, reaprendem e simplificam processos complexos típicos de pesquisas realizadas por seres humanos. A diversidade de mecanismos que a IA proporciona exige transparência no relato da sua utilização e garantia de que sejam consistentes com o rigor da comunicação científica e do seu ecossistema de gestão editorial (do qual participam editores, revisores e autores). **Objetivo.** O objetivo é fornecer elementos norteadores para o relato do uso de IA nas atividades que compõem o processo de publicação científica. Para tanto, são fornecidos conceitos, princípios e recomendações, para as três funções mencionadas, que proporcionam alfabetização e propõem mecanismos de aprendizagem para pessoas envolvidas em atividades de comunicação de conhecimento. **Guia.** Quatro partes são propostas no guia. A primeira considera um grupo de conceitos necessários para entender a dinâmica proposta nos princípios e recomendações fornecidos. Em particular, a definição de *prompts* (primários, secundários e complementares); da *rede de prompts* (ou *prompt network*) e os diagramas que conceituam seu uso são propostos. A segunda parte abrange editores e equipes editoriais e oferece recomendações para implementar políticas relacionadas à IA em seus periódicos. A terceira parte fornece aos revisores boas práticas para o uso de IA para apoiar o processo de avaliação de uma unidade de comunicação científica. A quarta apresenta uma estrutura ética e ferramentas concretas para os autores usarem IA em seu trabalho e relatá-la em seus manuscritos. **Reflexão final.** O objetivo final do uso da IA deve ser o bem comum e a melhoria da qualidade de vida das pessoas. Um exercício ético, que mitigue a introdução de preconceitos ou desinformação, deve ser um eixo central para a utilização desta ferramenta. Ter em mente que este é um fenômeno em evolução é relevante para futuras atualizações do guia e de seus conceitos.

Palavras-chave: Publicação científica; inteligência artificial generativa; modelo de linguagem de grande escala; rede de prompts; distorções; ciência aberta; ética.

ODS: ODS 4; Educação de qualidade.

Introduction and scope

Training and knowledge currently developed in academia address the debate on the ethical use of Artificial Intelligence (AI). How to interpret the scope of AI and how to regulate its use in university activities have become important questions to guarantee academic integrity (Unesco, 2023a), as its inappropriate use represents a mistake that limits the learning process, undermines the rigor and quality of scientific research, and represents a dilemma for those who generate knowledge in their responsible and ethical gathering of information. In addition, UNESCO identifies other impacts such as data protection, cognitive bias, reproduction of forms of discrimination, and availability and commercialization of information (Unesco, 2023a). García Velázquez (2023) considers the need to have digital infrastructures to access more tools of this type and more knowledge to be a paradox since, in reality, not everybody can access these infrastructures; thus, “these digital infrastructures perpetuate the inequity of access as much as they combat it, although they are often referred to as if they were ubiquitous and available to anyone” (p.155).

Using AI to enhance knowledge makes AI a supporting tool for educational endeavors, improving social development from multiple dimensions (including methodological, informative, or communicative) and enriching the academic community's efforts to promote quality education (SDG 4).

Based on these points of view and revisiting recommendations given by several entities that monitor scientific endeavors, these guidelines recommend the responsible use of AI, which, through transparency, facilitates the ethical use of this resource and promotes the primary intention of the creator to guarantee the rigor and responsibility of science and the collective benefit.

In the case of social sciences, it is necessary to reflect on the advantages of using this tool and the consequences of misusing it. García Velázquez (2023) and Ramos Pollán (2020) mention that this reflection process must consider that in social sciences —unlike other disciplines— the effects, advantages, or consequences will not necessarily be identified immediately. They highlight that within known applications such as sentiment analysis, extraction of key terms, image analytics, improvement of usability services, or addition of information layers, the proper data and metadata treatment is key to improving the availability and variety of data and its possibilities of relating. This, combined with precise inquiries from users, allows for calibrating and refining language models and improving the content of delivered products (García Velázquez, 2023; Ramos Pollán, 2020).

Open science (OS) promotes the extensive and intensive use of data; a rigorous, transparent, and reproducible research exercise; and the responsible and ethical use of information. With this in mind, OS recognizes the technology's potential to expand and make knowledge management more efficient and promotes the ethical use of Artificial

Intelligence as a tool whose ultimate goal is to reduce inequality and improve people's quality of life (Organization for Economic Co-operation and Development [OECD], 2023; Unesco, 2022).

Since this scenario has constantly evolving conditions, ensuring integrity and trust in AI-assisted research processes is imperative. As a publication model, open science aims at creating open scientific knowledge where transparency, control, critique, and reproducibility take a relevant role in data management and use (Unesco, 2021). In this framework, the objective of these guidelines, following OS best practices, is to provide guiding elements to promote transparent, responsible, and ethical reporting of AI in the activities included in the scientific publication process while recognizing AI evolution, growth, or transformation. Consequently, the guidelines are mainly aimed at three audiences:

1. Editors and editorial teams who want to establish the parameters of the use of AI in their publications.
2. Reviewers who require ethical and responsible good practices of use when supporting their reviews or assessments with AI.
3. Authors who seek guidance and good practices to transparently report their use of AI in their research processes and Scientific Communication Units (SCU) or articles.

These recommendations are based on six premises. The first premise considers that AI is an expanding tool; therefore, instead of blocking its possible applications in the scientific-academic publication environment, it aims to ensure transparency in its use and to either standardize or regulate it. The second premise proposes that, as per the open science model, the exposure of these routes in a structured way contributes to the traceability and reproducibility of research and knowledge. The third premise clarifies that these recommendations aim at voluntary, intentional, programmed, articulated, and explicit uses of AI tools in research and writing. It is understood that, due to the current conditions and characteristics, supporting documentation may have been used in the research that included AI without the user necessarily being aware of it; this case does not fall within the spectrum of these recommendations. The fourth premise indicates the guidelines' intention to be a vehicle for literacy in AI, OS, its ethical applications, transparent reporting, and the people's closer connection with a learning process, which can then be replicated in other journals, evaluation processes, publications, and ways of exchanging and generating knowledge. The fifth premise points out that while these recommendations are intended for editorial teams, review teams, or authors in education and social sciences, they are also expected to be useful as basic guidelines for other disciplines or individuals facing ethical debate about their use. The sixth premise stresses that each person's AI experience must be accompanied and regulated by best practices regarding human rights and ethical, bioethical, disciplinary, and professional knowledge. The individuals who decide to use AI are ultimately the ones responsible for the given use.

Supporting AI implementation with information about the ethics of AI use strengthens people's degree of accessibility, mitigates the fear or uncertainty caused by this issue, and generates the necessary empowerment for decision-making.

Guidelines for the use of AI in scientific-academic journals and publications

The guidelines are subdivided into four sections. The first section presents fundamental concepts for the understanding and application of the guidelines; the second section is aimed at editorial teams and establishes guiding principles and recommendations to regulate the use of AI in each journal. The third section is aimed at reviewers and considers guiding principles and recommendations for reporting the use of AI in the evaluation or refereeing process. The fourth section offers authors guiding principles and recommendations for using AI responsibly in their research and structurally reporting it in their SCUs.

It is relevant to clarify that the guidelines must show all the possible scenarios in which AI may be involved during the research process or the writing of a scientific text. Specifically, each researcher will identify the sections in which they have used the tool and will report accordingly, using only what is relevant from the guidelines.

A document review was conducted to validate the proposed guidelines, supporting relevant aspects of the principles and recommendations for each of the three groups mentioned.

The review highlights the following sources, which are arranged chronologically:

- The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration ([Liberati et al., 2009](#))
- Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement ([Moher et al., 2009](#))
- PRISMA Extension for Scoping Reviews ([Tricco et al., 2018](#))
- Updating guidance for reporting systematic reviews: Development of the PRISMA 2020 statement ([Page et al., 2021](#))
- Recomendación sobre la ética de la inteligencia artificial ([Unesco, 2022](#))
- Editors' Statement on the Responsible Use of Generative AI Technologies in the Scholarly Journal Publishing ([Kaebrick et al., 2023](#))
- Kit de herramientas global sobre IA y el estado de derecho para el poder judicial ([Unesco, 2023a](#))
- Chatbots, Generative AI, and Scholarly Manuscripts. WAME Recommendations ([Zielinski et al., 2023](#))

- Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals ([ICMJE, 2024a](#))
- Who Is an Author? Defining the Role of Authors and Contributors ([ICMJE, 2024b](#))

Key concepts

Reading the following concepts and definitions before implementing the guidelines is essential to acquiring or refreshing knowledge on the subject. It is important to clarify that specific definitions have been tailored when a particular source is not indicated to understand better the contents developed in the guidelines.

Artificial Intelligence (AI): The ability of a computer or computer-controlled robot to perform tasks traditionally associated with intelligent beings ([OECD, 2023](#); [OMPI, 2020](#); [Zielinski et al., 2023](#)).

Authorship / Author: This role must be fulfilled by the person who can:

- Make a substantial contribution to the published content (research design, data analysis, substantial review of the manuscript) and identify the contributions of the co-authors (if any).
- Assume moral and legal responsibility and account for the accuracy and completeness of what is written or about the intellectual work created.
- Respond legally and ethically to the contents of what is written.
- Approve or endorse the final versions of the content to be published.
- Respond to conflicts of interest.
- Provide an authorized manual or digital signature to support the previous points.

AI can generate content like a human being and responsibly and structurally explain its construction, but it cannot take a moral position on it. AI can explain its information selection and produce expressions that simulate human thought. However, it has no moral judgment about them and, therefore, cannot be considered an author or assume legal responsibility for what it generates ([International Committee of Medical Journal Editors \[ICMJE\], 2024a, 2024b](#); [Hicks et al., 2024](#); [Kaebnick et al., 2023](#); [Zielinski et al., 2023](#)).

Co-authoring: The co-author performs authoring actions in conjunction with other humans.

Copyright: Creators' (moral and property) rights over their literary, scientific, or artistic work; they support authors and protect their original intellectual creations manifested as creative and unique forms of expression from each author ([Organización Mundial de la Propiedad Intelectual \[OMPI\], 1996](#); [OMPI, 2016](#); [Registro Nacional de la República de Costa Rica, 2013b](#); [Unión of Berna, 1979](#)).

Creation: It is the product of a human's intellectual and original exercise (Ley 7397, Asamblea Legislativa de la República de Costa Rica, 1994). Co-creation is the product of several human beings' intellectual and original exercise, resulting in a creation understood as an indivisible whole (Ley 7397, Asamblea Legislativa de la República de Costa Rica, 1994).

Data: (research data) These are the actual records used or extracted from an information source or an object of study to conduct research, support it, or validate its findings. Instances would be numerical records, text, images, or sounds (OECD, 2007). They are typically classified as quantitative or qualitative, although their formats and origins are diverse. By combining, interpreting, analyzing, or processing them, they acquire meaning and provide information (Universidad de Alcalá, 2024).

Deep learning: It is a form of machine learning that uses multi-layer neural networks (deep networks) to simulate the human brain's decision-making process (IBM, n.d.).

Derivative work: It is the creation resulting from the adaptation, transformation, or modification of one or more original creations (Ley 6638, Asamblea Legislativa de la República de Costa Rica, 1982). In addition, OMPI (2015) states that derivative work must also consider "compilations of data or other material, whether in machine-readable or another form, which, because of the selection or arrangement of their contents, constitute intellectual creations" (p.10). For the ethical and respectful use of copyright and intellectual property (OMPI, 1996), it will be relevant that authors verify—when requesting a generative AI model to generate derivative work—that authorship is correctly cited and licensed to make the requested derivations.

Document model (JATS): The Journal Article Tag Suite (JATS) protocol is an international tagging standard for modeling or ordering journal articles' content and metadata structure. This model divides the text of a scientific paper into a three-part outline. The **front or preliminary matter** identifies descriptive metadata that refers to text information (for example, title, authorship, affiliations, abstract, or keywords). The **body matter** refers to the narrative content of the text (for example, the hierarchy of sections, paragraphs, tables, or figures). The **back or end matter** includes references and any other type of supplementary material, such as an appendix (Lapeyra, 2018). The information in Figures 1, 2, and 3 is structured based on this scheme.

FAIR Principles: These principles are the four areas that improve the interaction of computer systems with digital objects (GO FAIR, 2024). The four principles are as follows (GO FAIR, 2024): **Findable (findability)** refers to actions to characterize digital objects and assign specific identifiers to differentiate and find them. **Accessible (accessibility)** refers to the conditions under which data can be accessed, such as whether an identification or subscription filter must be passed to access it. **Interoperable (interoperability)** points to

accessible and widely applicable strategies for data to integrate with other data, metadata, applications, or workflows. **Reusable (reusability)** refers to the importance of having appropriately characterized or described data to optimize its potential for replicability and combination. In the OS framework, this potential is of particular interest because it optimizes technical aspects that allow information to be shared openly, and by applying good practices in this regard, the quality of the data shared is improved by extension.

Fair use: It allows the use of the creation or work by third parties without having to request permission from the author or whoever has the copyrights as long as the authorship is cited. This aligns with human rights regulations and other instruments, such as the Berne Convention (APA, 2020; Appel et al., 2023; Jiménez Cardona, 2024; Naciones Unidas, 1948; Unión de Berna, 1979).

Generative Artificial Intelligence: Generative AI performs tasks typically associated with intelligent beings using generative modeling and deep learning to produce or generate content from existing media (graphics, text, audio, video), statistical models, and language based on probabilities and algorithms (OECD, 2023; OMPI, 2020; Zielinski et al., 2023).

Generative modeling: An AI technique that generates products by analyzing training examples that allow AI to learn patterns and distribution to create realistic outcomes (Zielinski et al., 2023).

Intellectual property: It considers all creations involving an author's or creator's creativity and originality, thus conferring ownership over them. Intellectual property is divided into two branches: industrial property and copyright (Registro Nacional de la República de Costa Rica, 2013a; OMPI, 2020).

Metadata: It refers to data that describes or characterizes resources, records, or data resulting from the research or reflection process. Comisión Económica para América Latina y el Caribe [CEPAL] (2024) states that such a description or characterization structure allows computers' agile and efficient reading and facilitates interoperability. In addition, CEPAL (2024) identifies three types of metadata: **descriptive metadata**, which characterizes the content of a resource (for example, title, authorship, affiliations, keywords, abstract, or references); **administrative metadata**, which describes the creation of a resource or the means to manage it (for example, technical, preservation, management, or licensing metadata, or intellectual property terms); and **structural metadata** which describes the relationships between the different parts of a resource (for example, table of contents or diagram).

Peer review: Also known as refereeing or peer evaluation. In these guidelines, peer review should be understood as the process in which the editorial team selects individuals with proven experience in a given field of knowledge to analyze, review, evaluate, and comment on an SCU submitted by authors to a journal. Currently, the varied review models can be classified as **closed-open** (anonymization or explicit identification of one or more parts of the editorial process: authorship, review, or editing) or **public** (where readers have access to the content of the reviews and know the reviewers' identities). Other dynamics can also be identified, such as the exchange or transfer of refereeing between journals or post-publication evaluation (evaluation comments are received after the SCU has been evaluated).

Prompt: A prompt is a plain-language statement or instruction the user provides to an AI model to obtain an output (Zielinski et al., 2023). Ramos Pollán (2020, p. 33) emphasizes that the practical applications of these systems or models will depend, among other aspects, on "our ability to clearly define what we want to achieve with them." In academia and research, precision in constructing prompts is essential to obtain an appropriate response (Walter, 2024). However, the focus of this document is not to develop strategies to have effective prompts. Achieving an adequate level of precision includes the explicit articulation of an action complemented by descriptions and delimitations, for example, roles from which the desired tone of the response is to be obtained, formats in which the product is to be systematized, and any other elements that help refine the final output.

Initial prompt: the first query or instruction given to the AI and from which second and supplementary queries or instructions start.

Second prompt: query or instruction (or series of queries or instructions) given to the AI to delimit or learn more about the initial prompt by:

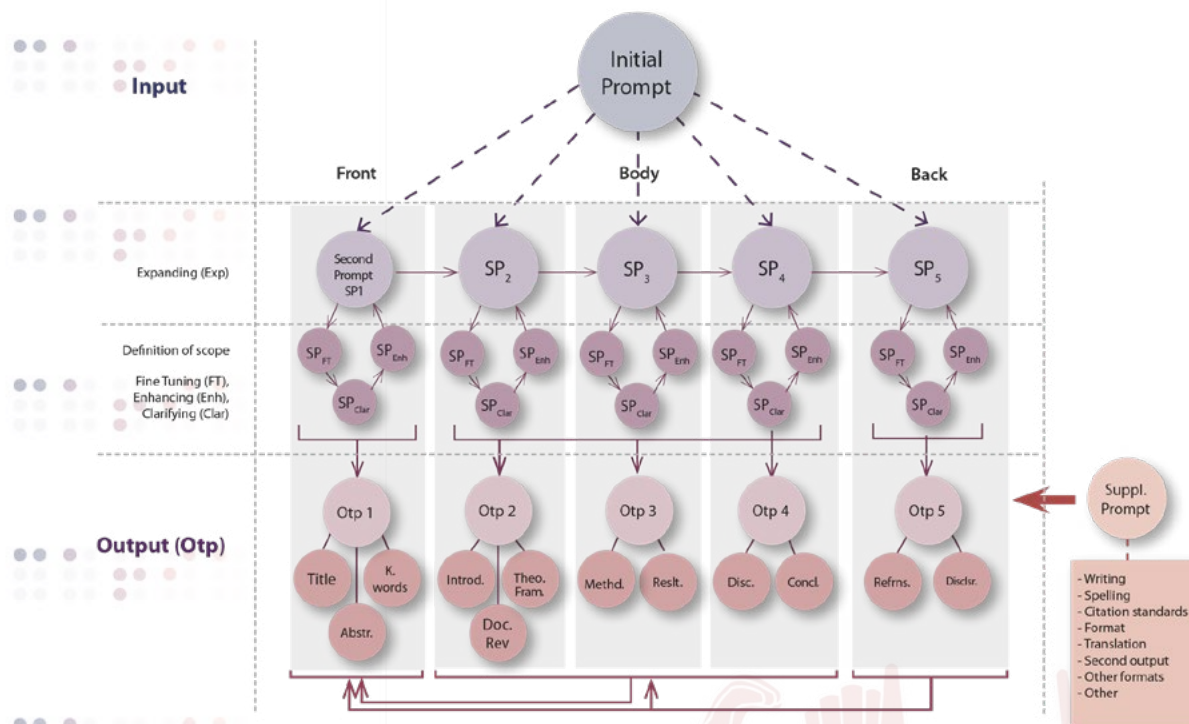
- enhancing: incorporating additional features into the initial prompt.
- expanding: adding variables or conditions not contemplated in the initial prompt.
- fine tuning: delimiting or debugging the initial prompt.
- clarifying: requesting more information to explain the product or AI-generated response to an initial or second prompt.

Supplemental prompt: an instruction given to the AI to complement the product of the query performed (initial and second prompts) once a satisfactory result has been achieved. For example, improve aspects related to writing, spelling, or formatting; apply citation standards; systematize in smaller units; convert to other formats (audio, audio transcripts, gifs, video clips, tables, diagrams, among others); or translate.

Prompt network (hereinafter referred to as *prompt net*): It shall be understood as the network that evidences the relationships between prompts—initial, second, or supplemental—used to supplement different parts of an article's research or writing process. It can be expressed as an outline or relationship diagram (see Figures 1, 2, and 3). In review (or refereeing) or scientific editing scenarios, the prompt net refers to the orderly actions an editor or reviewer gives to the AI to complement the respective tasks. Gemini (Bard 1.0 Pro, 2024) was used to validate the preparation of prompt nets, as proposed in these guidelines.

To organize the conceptualization and AI proposed report, Figures 1, 2, and 3 take the document model with the JATS format. Figure 1 conceptualizes the prompt net and shows the possible interactions between the initial prompt and its delimitations. Low-complexity scenarios will tend to mention the use of AI more punctually. In contrast, more complex scenarios with significant or intensive use will have greater inputs to graph the interactions described in the diagram. The more complex the query scenario, the more number and type of interactions will take place, thus enhancing the prompt net.

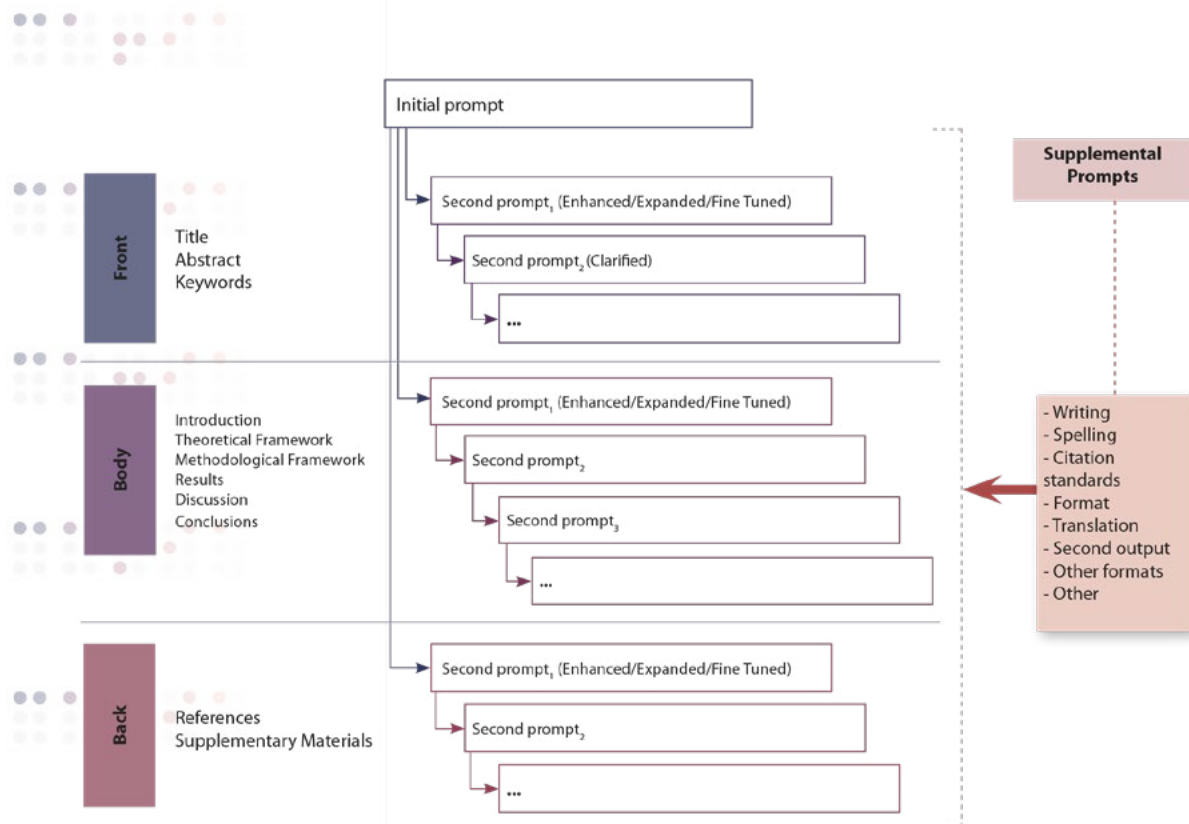
Figure 1: Prompt net, relationship between initial prompt and possible second and supplementary prompts



Note: Developed by the authors.

Figure 2 exemplifies the relationship diagram prepared by an author to show the prompt net used in their text and their derivations. Low complexity scenarios will not necessarily report the use of AI in all the sections of an SCU, while higher complexity scenarios will identify more second prompts per SCU section.

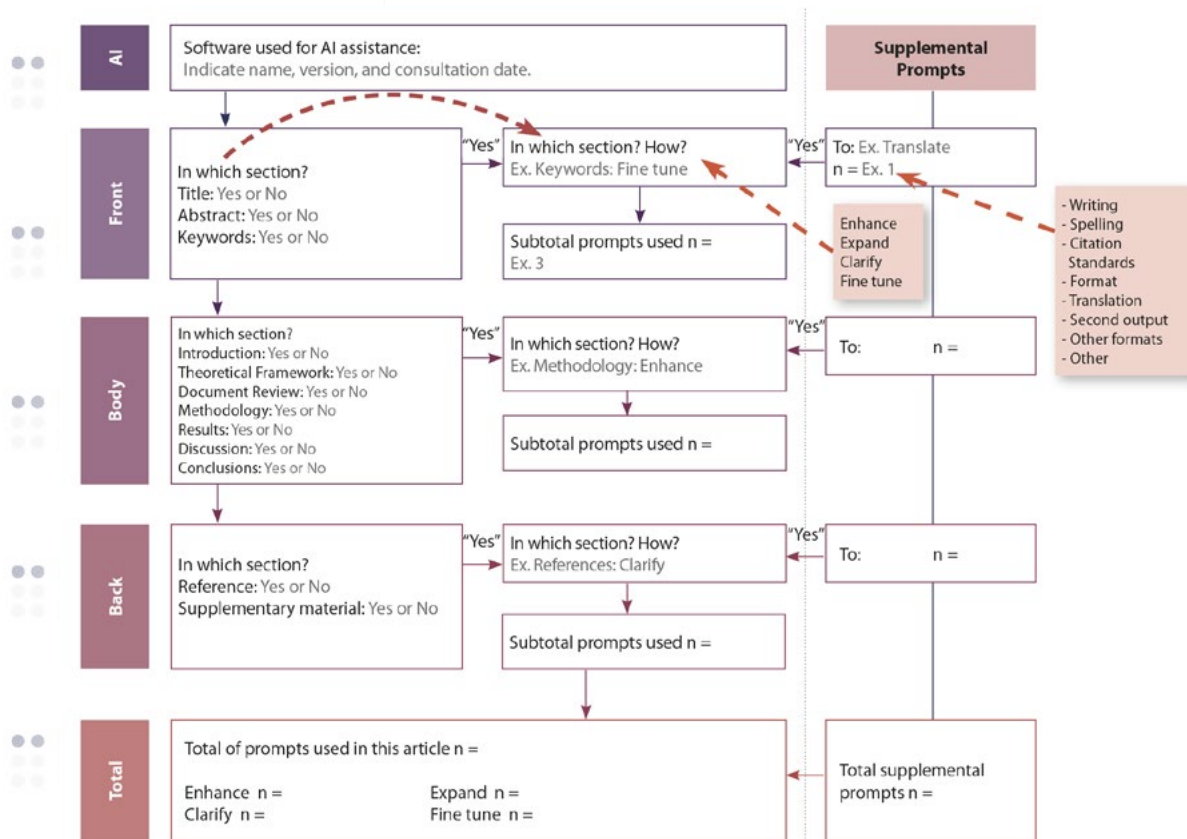
Figure 2: Example diagram to report the relationships between prompts, sorted by section or part of the article and classified as initial or second and supplemental prompts



Note: Developed by the authors.

Figure 3 shows the flowchart for reporting the use of AI to be added to the methodology of the article or SCU. The flowchart can help identify and quantify the prompts used by the SCU section and the criteria used to define the scope. A low-complexity scenario will not necessarily report the use in each section. In contrast, the greater the complexity involved in using AI, the greater the number of prompts accounted for.

Figure 3: Flowchart for reporting the use of Artificial Intelligence in Scientific Communication Units¹



¹ The uses in this figure represent all possible scenarios of AI applications in scientific texts. Authors will determine in which sections it is necessary (and in which not) to mention the use. Therefore, more specific uses result in fewer mentions, whereas greater uses require a higher level of detail per section to support the use of AI.

Note: Developed by the authors.

Scientific Communication Unit (SCU): Minimum structure of a scientific and scholarly text to communicate information. It contains at least a title, authorship, affiliation, content (using standardized vocabulary to organize the writing), and references. Ex: Scientific article, review article, or scientific essay.

Transformative use: This use refers to the modifications, adaptations, or transformations applied to one or more works or creations intending to have changes that give the new work a different character compared to the original work (Jiménez Cardona, 2024). For the ethical and respectful use of copyright and intellectual property, authors should verify the degree of transformation of the generated output.

Use of AI:

Filtered: It involves the use or incorporation of AI-generated output into the SCU (or the result of peer review or editorial management) after a human being has verified its relevance, veracity, the correspondence and consistency between the instruction given and the output obtained, the validity of the methods of analysis, and the ethical treatment of the data.

Unfiltered: This involves the use or incorporation of outputs delivered by the AI to the SCU without human review filtering its relevance and veracity.

Works: Within the framework of Article 2 of the Berne Convention (Unión de Berna, 1979), every production or creation in the literary, scientific, or artistic domain, whatever may be the mode or form of its expression, is considered a work.

Guidelines for editorial teams to establish policies, instructions, and good practices on the use of AI in their scientific journals

These recommendations are directed at editorial teams that aim to implement instructions and good practices for addressing the use of AI in their publications. In addition to guiding principles, two sets of recommendations are proposed. The first set, [Table 1](#), shows the recommendations for presenting or reporting the use of AI in different sections of a journal's website or the topics covered in those sections. Alternatively, [Table 2](#) shows recommendations for developing a policy on the use of Artificial Intelligence, combining all the considerations into a single section. In addition, [Table 3](#) shows some complementary actions that may accompany the process of adopting and disseminating an AI-use policy.

Guiding principles

Editorial dynamics comprise, at least, the interaction of three essential roles in the communication of knowledge: editing, review, and authorship. The editor is called to mediate the interaction during the process leading to the SCU publication (see [Table 1](#)). In this regard, it is advisable to consider the following principles.

- The editing role is exercised by human beings who can mediate the publishing of scientific documents.
- Understanding that AI can bring novelty and challenges to editorial management, those in these roles are called to train and be vehicles for literacy and training in responsible and transparent practices for reviewers, authors, and readers.
- Editors are responsible for ensuring that the processes leading to publication incorporate good practices and ethical, responsible, and transparent behavior of all parties involved. This includes the use of AI during the editing process.

- In an exercise of transparency, editors will notify authors of the use of AI while evaluating their articles and editorial processing. In addition, they will ensure that readers are informed when AI has been used in published articles.
- AI should not replace or supersede the responsibilities of editors or accountability for these tasks.
- The editorial process should not depend on the use of AI. Instead, it will be considered a support tool to make management more efficient.

Table 1: Recommendations to editors or editorial teams to demonstrate the use of AI in journal sections

Section or topic	Recommendation
Definition of the scope of document typologies	Identify which document typology or SCU published by your journal will accept the use of AI. In each document typology or SCU, indicate the sections where the journal considers it essential or optional to mention the use of AI.
Target audience	Indicate for whom the AI-use recommendations or good practices are intended and identify the disclosure's potential beneficiaries.
Citation standards	Indicate how authors should quote and reference the use of an AI language model or system. This must follow the citation standards recommended by the journal for SCUs.
Review model, refereeing or peer review	Define whether the use of AI is allowed when conducting peer review. Verify that the journal's refereeing model is consistent with the use of AI or make appropriate modifications to monitor this tool without conflicting with the disclosure of the authors' or reviewers' identities. If AI is allowed, establish the rules that reviewers must follow to effectively and transparently report its use.
Evaluation tools	Identify whether compliance with the good practices described in the policy or disclosure is assessable and how this is reflected in the review, evaluation, or decision-making tools. It must be consistent with the definition of the scope of document typologies applied in the journal regarding the use of AI.
Disclosure of ethical considerations	Describe the ethical scope of AI in the journal's publications. Identify scopes regarding: - the definition of the authorship role: Indicate it is limited to people and, therefore, it excludes AI. - respect for intellectual property and copyright - elimination of biases - actions taken to prevent the spread of misinformation - protection of sensitive information and personal data of informants or research participants - fundraising to use AI - limitations of the derivative work and transformative use resulting from the use of AI, especially in the case of images - the responsibilities of editors, reviewers, authors, and readers regarding the responsible use of AI - the general report on the use of AI, or where applicable, each section in which it is used.

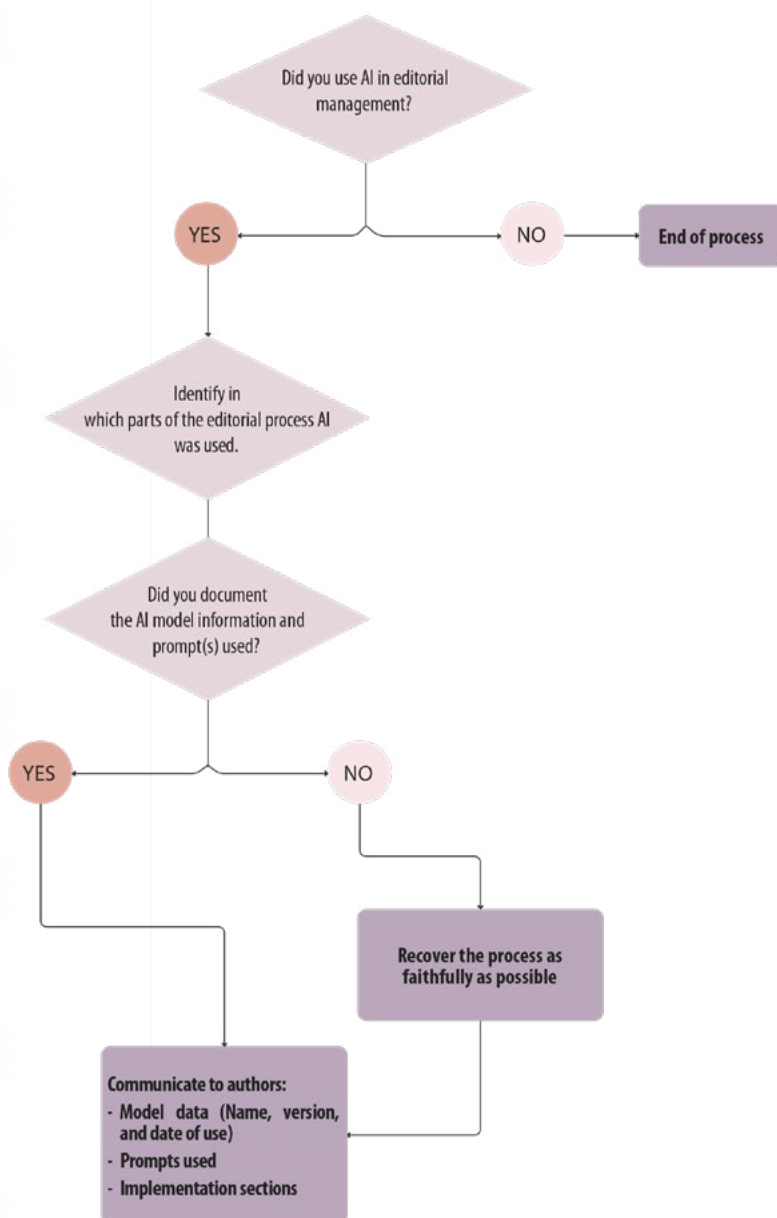
Continued...

Section or topic	Recommendation
Instructions for authors	If applicable, consider creating a new section where the journal explains what steps authors should take to report AI use (for example, see Figures 1, 2, and 3).
	Identify the SCU sections where AI use should be reported.
	Mention, if necessary, the use of AI according to the characteristics of document typologies or the SCU published by the journal.
	Verify that the actions requested or recommended in the different sections of the journal website are reflected in this section in a timely manner [Instructions for authors].
	Make sure that authors understand and accept that the use of AI for editorial and peer review processes in the journal potentially implies that their material is incorporated into the training information of the AI model used in each process or stage.
Positioning from editorial management	Identify if the journal conducts editorial processes supported by AI, such as verifying compliance with requirements or open science principles; detecting plagiarism; selecting reviewers' profiles; preparing emails; preparing copies or copywriting for dissemination on social networks; doing stylistic or philological reviews; validating thematic relevance, innovation, impact, or scope of a manuscript (Cardoso Sampaio, 2024).
	Identify if the journal allows reviewers to use AI and what means are established for transparently reporting its use when evaluating manuscripts.
	Disclose whether the journal has mechanisms, tools, or instruments for transparency or detection of the use of AI in manuscripts submitted for publication or refereeing and at what stages of the process they are used.
	Notify authors if their material will be likely delivered to an AI model as training data.

Note: Developed by the authors.

[Figure 4](#) shows a flowchart that verifies the decision-making process concerning the incorporation of AI into editorial management.

Figure 4: Flowchart of the use of AI in editorial management



Note: Developed by the authors.

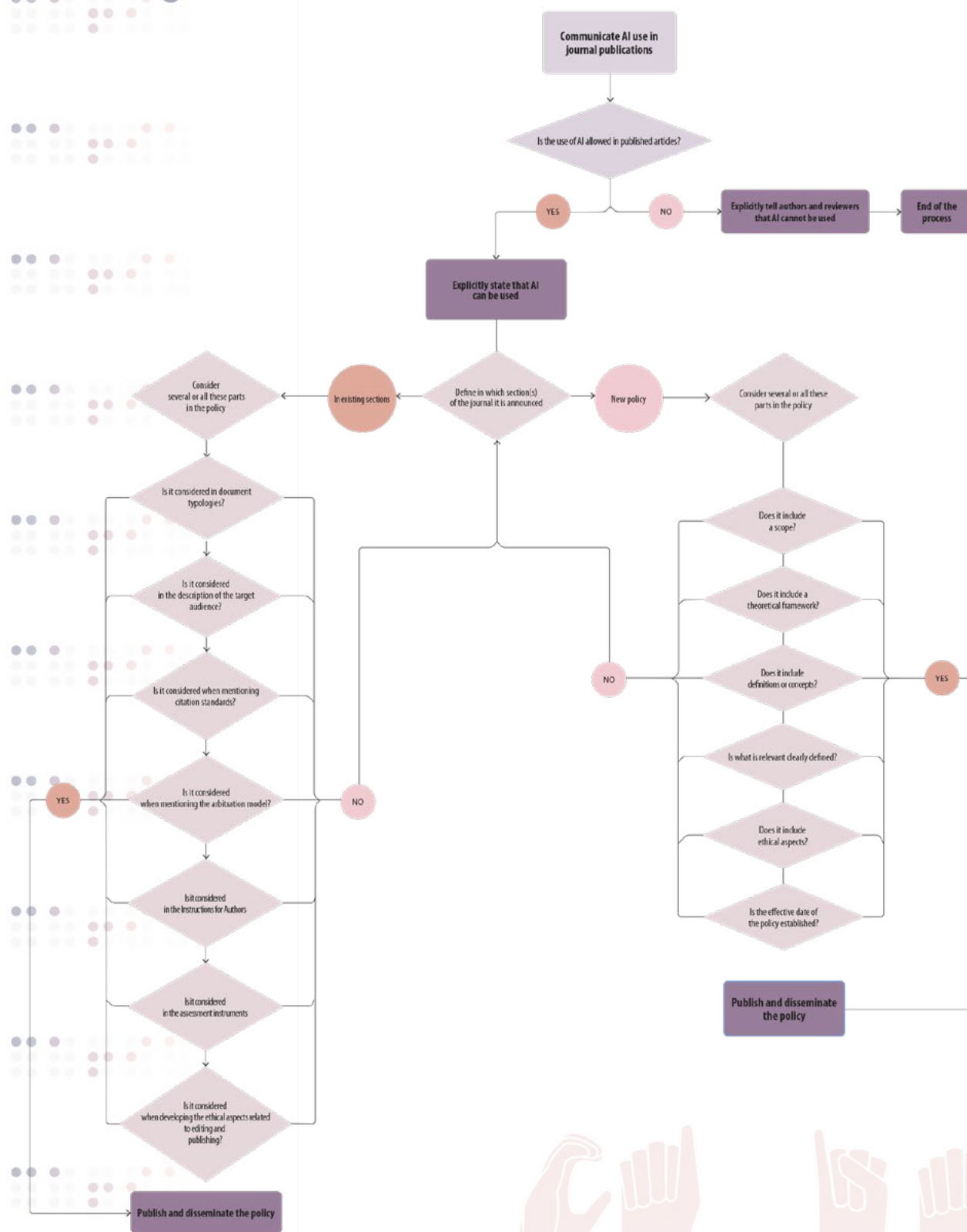
Table 2: Recommendations to editors or editorial teams for the development of a policy for the use of Artificial Intelligence in a journal

AI policy or disclosure	Recommendation
Scope	Define: - who it applies to (stakeholders), for example, editorial teams, members of the refereeing committee, authors, and others. - which document typologies are covered by the recommendations. - verify that the journal's policy is consistent with AI-use regulations from the organization sponsoring the publication, if any. - identify if the regulations of the organization the journal belongs to require any endorsement. - Identify if there are any exceptions, restrictions, or limitations.
Sources and theoretical framework	Explicitly identify the sources that help support and theoretically position you to make your recommendations (fair use).
Definitions or concepts	Include a specific list of definitions needed to understand the details of implementing AI in your journal.
Disclosure or policy	Establish the responsibilities for each interested party (at least cover the editor, author, and reviewer roles).
	Define the authorized and unauthorized uses of AI to publish the document typologies or SCUs disclosed by your journal.
	Request authors to explicitly disclose at least the following (see Tables 5 and 6):
	- AI model, version, and date of use - prompts or instructions given to obtain the output - what criteria have been used to validate the veracity of the information generated by the AI
	Describe the expected ethical behaviors of each party involved in the publishing process.
Effective date or temporality	Identify the tools you have in place to ensure good use of AI, what the use is, and where in the process they are used.
	Explain or caution that incorporating AI into your journal's editorial and peer review processes could potentially imply that the submitted or proposed texts become part of the training information of the AI model used in each process or stage.
	Incorporate any other indications necessary to make an appropriate report of the use of AI.
Effective date or temporality	Establish when the recommendations and good practices are adopted.

Note: Developed by the authors.

Figure 5 provides a flowchart that allows editors to verify the actions necessary to incorporate an AI-use policy into their management.

Figure 5: Flowchart of AI incorporation into journal management policies



Note: Developed by the authors.

Table 3: Complementary actions for the adoption of practices to regulate the use of AI in a journal

Other actions	Recommendation
Communication with teams and stakeholders	Identify the stakeholders that should be notified about the implementation of this policy, for example: • Editorial teams • Institution to which the journal is affiliated • Members of the Refereeing Committee • Authors • Other
	Prepare a message that: • communicates the most relevant aspects of the AI-use policy (or the adoption of related good practices) • is tailored to each stakeholder
	Clearly specify when the policy or good practices will begin to be in effect.
Dissemination	Let the community of readers, authors, and reviewers know when the policy, disclosure, or good practices on the use of AI will be implemented with a notice on the journal's website.
	Provide a means of contact for inquiries or clarifications.
	Generate graphic formats and specific messages (copies, copywriting) to communicate the adoption or implementation of the policy, declaration, or good practices on using AI.
Control and monitoring	Reinforce the message within your organization by sharing the novelty of adopting AI practices in the institutional mail and spaces for academic exchange and dialogue.
	Establish an action schedule that allows you to keep track of when you complete stages, from the preparation of the policy, disclosure, or good practices prompts to the communication of the date when they will be implemented.
	Respond to queries from authors, readers, reviewers, or the journal's editorial board members and adjust what is pertinent when writing policies, statements, or good practices prompts.
	Explore AI-use review or verification tools for text writing and other publication-related uses.
	Seek permanent updates on using AI in scientific publishing always to offer the latest information.

Note: Developed by the authors.

Guidelines for reporting the use of AI in peer review, refereeing, or article evaluation

Peer review is an important part of validating the contents an author will publish in a scientific-academic journal. Despite the observations, criticisms, or objections raised about this filter—such as subjectivity, bias, professional jealousy, appropriation of ideas, the time required to conduct it, and lack of transparency—review or evaluation remains an accepted and integral method within the culture of scientific-academic publishing. It is widely recognized as a key part of the editorial process and serves as a valuable space for exchanging and refining ideas to enhance how humans communicate their research findings and reflections (Bhosale & Kapadia, 2023).

In its most virtuous spirit, refereeing or peer review significantly contributes to the publication process through the critical analysis of texts and the exchange between reviewers, authors, and editors. This process leaves a record, which, although often confidential or anonymous, is traceable and can be associated with human beings responsible for the criteria issued.

In the 21st century and within the OS framework, refereeing models in the review process have diversified, the use of AI being an additional factor added to this diversity.

Guiding principles for reviewers disclosing the use of AI in article refereeing or evaluation

When proposing recommendations for peer reviewers to transparently report the use of Artificial Intelligence in the review of manuscripts, the following aspects should be considered:

- Peer reviewers or referees are humans with experience in the disciplinary field in which the evaluation is performed.
- Reviewers should disclose the use of AI as part of the article evaluation.
- Reviewers are ultimately responsible for the criteria and recommendations issued on their behalf. In that framework, they are also responsible for the queries, instructions, or prompts they give as input to an AI system to obtain support for their refereeing process. Reviewers should seek good practices that prevent misinformation and respect sensitive data.
- For transparency purposes, reviewers must notify the editorial team or the editor-in-chief of their use of AI in evaluating articles.
- AI should not replace or supersede the reviewers' responsibility for their issued criteria and recommendations.

- Reviewers should not rely on AI to evaluate manuscripts but use it as a support tool to streamline the refereeing process and make it more efficient.
- Also, for transparency purposes, the editorial team will inform authors when reviewers have used AI in their manuscript review.

Recommendations for reporting AI use in peer review or evaluation of scientific-academic texts

Table 4 organizes the recommendations for transparently reporting the responsible use of AI in the process of reviewing academic-scientific texts.

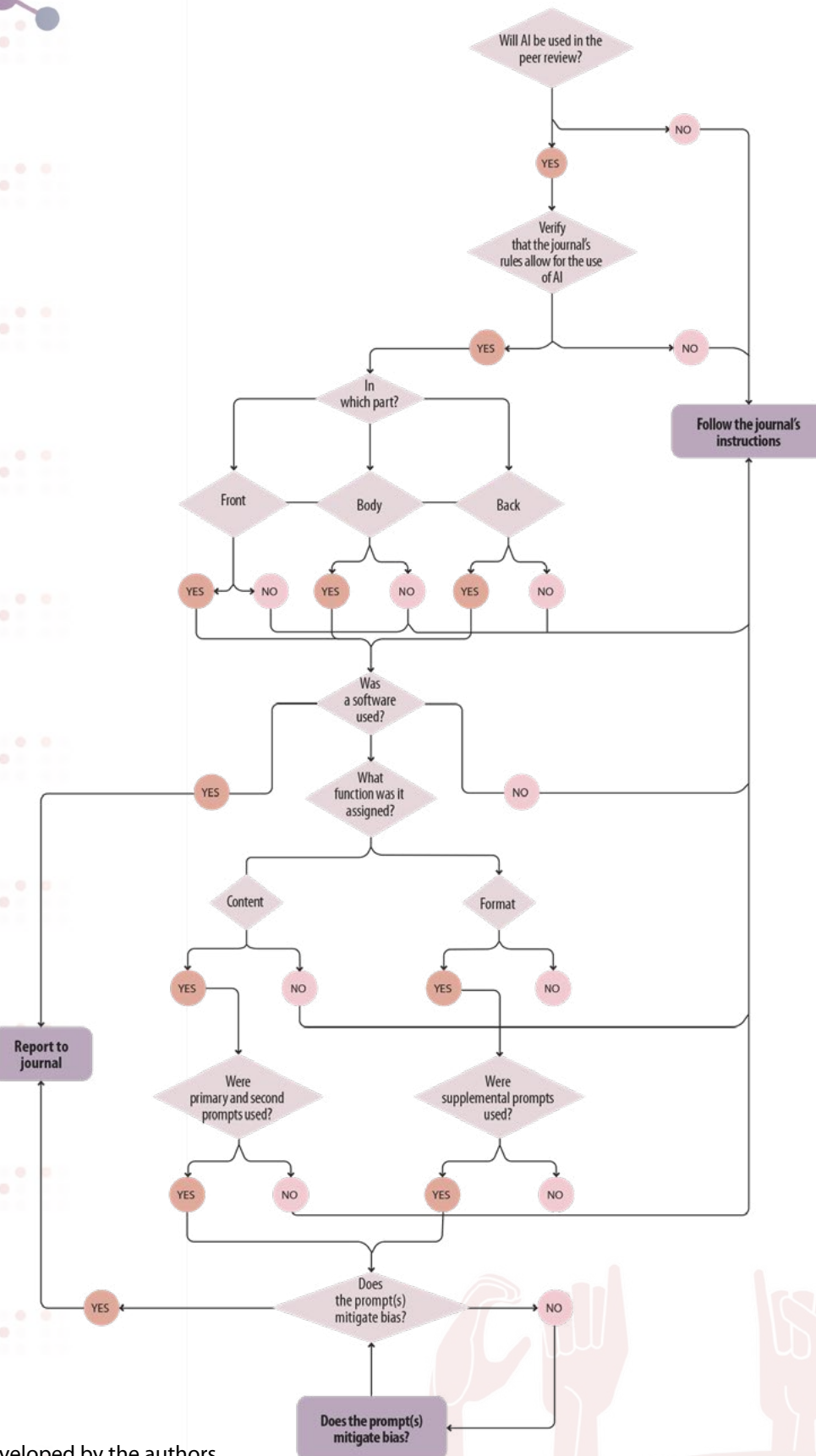
Table 4: Checklist of recommendations and good practices for peer reviewers reporting the use of AI in the review of scientific texts (SCU)

Criteria	Recommendation
Preliminary considerations	Verify that the journal receiving the evaluation endorses using AI in the review process.
	Verify that the journal has previously informed authors that their manuscript may be uploaded (entirely or partly) to an AI application to complement the review process and that it may become part of training data.
	If you upload portions or your complete text, cite authorship to indicate ownership of the information or configure the tool to ensure the information is not used as part of the training data.
Identify the model	When the approach is unclear, refrain from uploading material in an application.
Prompt or query parameters	Explicitly state the Large Language Model (LLM), version used, and date(s) of use. Cite authorship and year according to APA (2020) (see References section, Table 6).
	Specify any considerations relevant to creating the prompt: • Provide the initial prompt. • Provide the second prompts that modify the output of the first instruction. • Make visible, when appropriate, the prompt net built to articulate the use of AI in reviewing the assigned text.
Criteria for use	Unfiltered use of AI should not be accepted or considered valid for review.
	Point out what criteria you used to filter (see filtered use of AI) the response generated by AI from your prompt(s).
	Identify if AI supported another action during the evaluation process. For example: • assist in writing the evaluation, • help transform or systematize criteria, • have other uses or perform other actions?
Ethical considerations	Verify if the journal has indications or instructions related to the use of AI.
	Indicate what actions have been taken to reduce bias or misinformation while using AI.

Note: Developed by the authors.

Figure 6 provides a flowchart that organizes actions for using and reporting AI in peer review.

Figure 6: Flowchart to incorporate AI in the peer review



Note: Developed by the authors.

Guidelines for authors to report the use of AI in scientific-academic texts

In the publishing process, where the actions accompanying the communication of knowledge are increasingly complex, authors are called to at least explain clearly and transparently how they used AI and avoided creating and spreading bias. AI should be seen as a tool for managing knowledge, ultimately aiming to enhance the quality of human life.

These guidelines cover the sections of scientific-academic texts in which AI can potentially be used. The primary intention is that authors can report, in an effective and detailed way, how they have incorporated this tool into their texts and leave evidence of the route they have followed so that others can understand the use given and, eventually, replicate it.

Guiding principles for authors to disclose the use of AI in their manuscripts

When making recommendations for authors to properly, transparently, and rigorously report on the use of Artificial Intelligence, the following aspects should be considered:

- Authorship is conducted by humans, who can use their intellect to generate works for which they assume moral and legal responsibilities.
- Authors are ultimately responsible for the content published in their name and, therefore, for the queries made to an AI system to generate, develop, expand, or complement the published content. Authors should seek good practices that prevent misinformation and respect personal or sensitive data.
- AI does not replace humans' legal responsibility, accountability of decision-making, the relevance and consistency of the theoretical positioning taken, the methods followed, or the selection of published content.
- For transparency purposes, authors must notify the editorial team or the editor-in-chief of their use of AI in manuscripts submitted to a journal.
- Following the principle of reciprocity, the editorial team will communicate to the authors their use of AI to complement or expand the evaluation or refereeing of the content or to conduct editorial management tasks.

Recommendations for reporting the use of AI in scientific-academic texts

Table 5 presents, by the typical sections of a scientific article, the recommendations and good practices that authors should consider when responsibly, standardly, and transparently reporting the use of AI in their manuscripts.

Table 5: Checklist of recommendations and good practices for authors reporting the use of AI in scientific texts resulting from research or document review

Section of the scientific text	Criteria	Recommendation ³
Title	Accuracy	When using AI is decisive for the document's content, show it in the title.
Abstract	Structured Abstract	Mention the use of AI in each section of the abstract where it has a relevant or strategic value to the content of the SCU.
Introduction	Justification	Describe and justify the use of AI in your document. Explicitly explain and identify whether AI has assisted in writing, transformed information, or conducted analyses.
	Objectives	Explicitly mention in your objectives why AI is used in your SCU or include an explicit objective that justifies the use of AI in your SCU.
Theoretical Framework	Contextualization	Report which contextualization sources were provided by AI (fair use). If AI was used, you must specify it in the criteria of use, definition of the scope, and ethical considerations that you will describe in the methodology.
	Conceptualization	Report which contextualization sources were provided by AI (fair use). If AI was used, you must specify it in the criteria for use, the definition of the scope, and the ethical considerations described in the methodology.
Methodology	Identification of the model	Explicitly state the Large Language Model (LLM), version used, and date(s) of use. Cite authorship and year according to APA (2020) (see references section).
	AI Role	Unfiltered use of AI should not be accepted or considered valid. Report the criteria for use (inclusion or exclusion) and information filtering to ensure its relevance and validity (see filtered use of AI). Consider these use parameters: - writing assistance - convert from other formats to text (e.g., diagrams, tables, images, audio, videos). - convert text to other formats (e.g., diagrams, tables, images, audio, videos). - implement analysis and generate results. Identify, at least, where the information analyzed by AI comes from and if tables and figures are created to systematize results or a code is written. - extract descriptors or vocabulary from the text, which are presented as keywords in the SCU. - were other results obtained or other actions performed?

Continued...

Section of the scientific text	Criteria	Recommendation ³
Methodology (continued)	Definition of the scope of the query or prompt ^{1, 2}	- Specify what considerations were taken to prepare the prompt/instruction marked in the AI model as the initial prompt. - Provide the initial prompt. - Provide the second and supplemental prompts that modify the output of the initial prompt. - When appropriate, ensure that the prompt net prepared to articulate the use of AI in the article or SCU is visible.
	Results analysis	Indicate the criteria for including or excluding the data obtained in response to the initial prompt, second prompts, or the prompt net.
	Ethical considerations	Indicate what actions have been taken to reduce bias, misinformation, plagiarism, or bad practices while using AI. Indicate what actions have been taken to protect sensitive data (where applicable), such as anonymization. If you have used AI-produced images, indicate whether the input images respect intellectual property and have permission to make derivative work or apply a transformative use.
Results	Results report	Explain which presented products, results, or systematization of results come from the material requested from the AI. If you have prepared tables and figures with AI assistance, mention their use in a note to the table or figure. For example: Note: Prepared with assistance from [model name, version, and date] (Author, year).
Discussion	Results discussion	Report if you have requested IA to complement the discussion of your manuscript by considering any of the following dimensions: - synthesize or systematize arguments - contrast differences or compare similarities between the existing evidence and the results found - establish explanatory mechanisms for the findings - complement the preparation of the discussion
Conclusions	Summary or systematization report	Report if you have asked AI to synthesize or systematize arguments, limitations, and recommendations to complement the conclusions of your manuscript.

Continued...

Section of the scientific text	Criteria	Recommendation ³
Disclosures	Disclosure of the use of Artificial Intelligence	Clarify conflicts of interest, disclaimers, and any aspects related to the use of AI. Mention, for example: Artificial Intelligence assisted in this manuscript's research and development process. [Model name, version, and date] was used, and humans mediated its use.
References	According to APA standards	Follow the structure below for the reference of the AI model(s) used: Algorithm issuer. (year). Model name (month day version) [Language model]. https://... For example: OpenAI. (2023). ChatGPT (May 21 version) [Large Language Model]. https://chat.openai.com/auth/login In the text, mention: Authorship (year) or (Authorship, year): OpenAI (2023) or (OpenAI, 2023)

¹ See the concepts prompt, initial prompt, second prompt, and supplemental prompt in the definitions section.

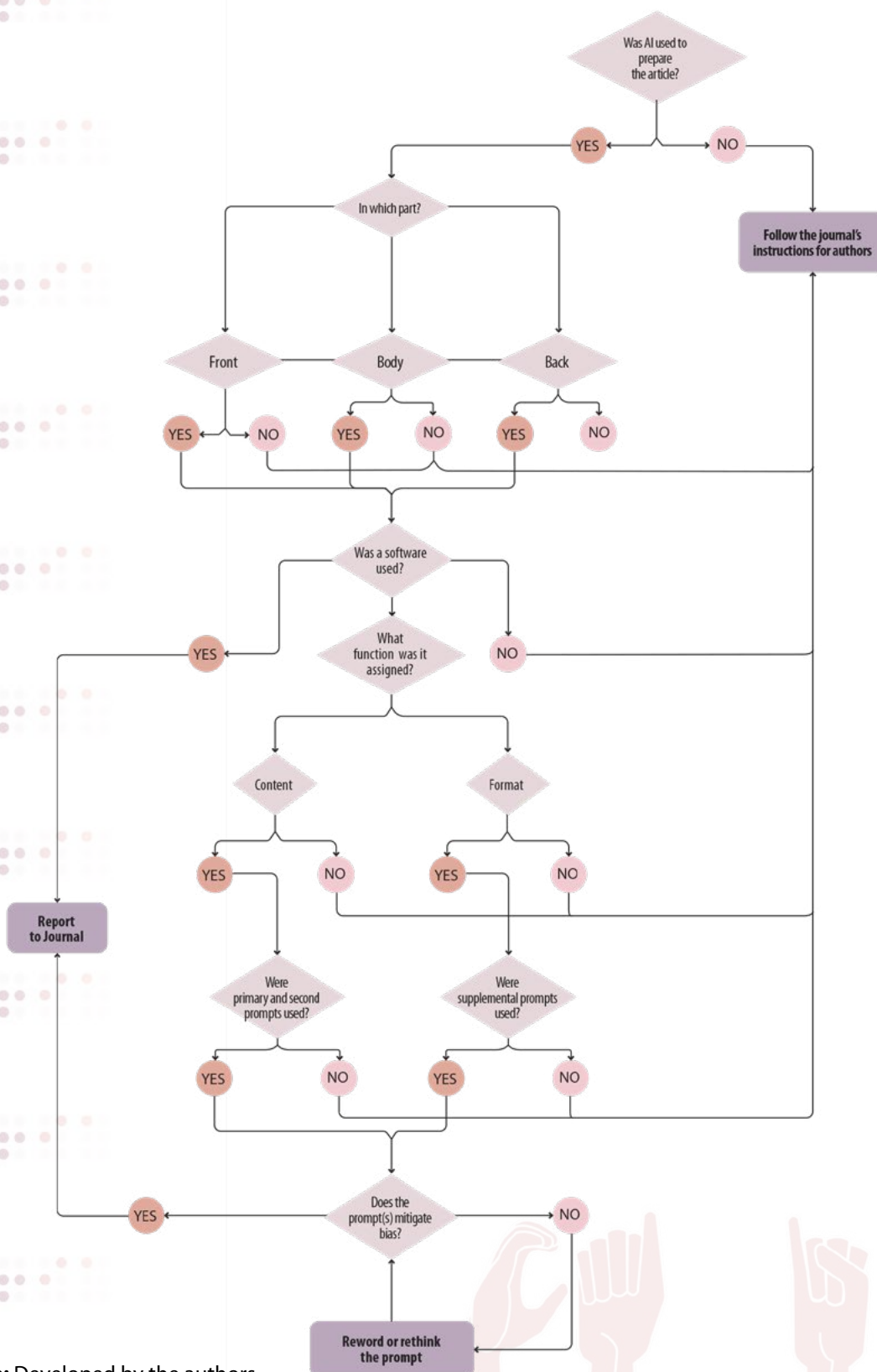
² See Figures 1, 2, and 3.

³ The uses depicted in this table represent all possible scenarios for applying AI in scientific texts. Authors will determine in which sections it is necessary (and in which ones it is not) to mention its use. Consequently, for very specific uses, there are fewer mentions, while the greater the use, the greater the level of detail per section to support the use of AI.

Note: Developed by the authors.

Figure 7 provides a flowchart that systematizes actions related to using and reporting AI in writing scientific texts.

Figure 7: Flowchart to add AI into the writing of scientific texts



Note: Developed by the authors.

Ordered by the sections of an essay, Table 6 presents the recommendations and good practices that authors should consider when reporting using AI in their manuscripts responsibly, standardly, and transparently.

Table 6: Checklist of recommendations and good practices for reporting the use of AI in essays

Section	Criteria	Recommendation
Title	Accuracy	When using AI is decisive for the document's content, show it in the title.
Abstract	Structured Abstract	Mention the use of AI in each section of the abstract where it has a relevant or strategic value to the content of the essay.
	Justification	Describe and justify the use of AI in your document. Explicitly explain and identify whether AI has assisted in writing, transformed information, or conducted analyses.
	Objectives	Explicitly mention in your objectives why AI is used in your essay or include an explicit objective that justifies the use of AI.
	Definition of the scope	Unfiltered use of AI will not be accepted or considered valid.
	Identification of the model	Explicitly state the Large Language Model (LLM), version used, and date(s) of use. Cite authorship and year according to APA (2020) (see references section).
Introduction	AI Role	Report the criteria for use (inclusion or exclusion) and information filtering to ensure its relevance and validity (see filtered use of AI). Consider these use parameters: - writing assistance - convert from other formats to text (e.g., diagrams, tables, images, audio, videos). - convert text to other formats (e.g., diagrams, tables, images, audio, videos). - proposes, compares, relates, contrasts, systematizes arguments, and performs analysis. In this regard, identify at least the sources of the information analyzed by AI.n. - extract descriptors or vocabulary from the text, which are presented as keywords in the SCU. - were other results obtained or other actions performed?
		Specify what considerations were taken to prepare the initial prompt.
		Provide the initial prompt.
	Definition of the scope of the query or prompt ^{1, 2}	Provide the second and supplemental prompts that modify the output of the initial prompt.
		When appropriate, ensure that the prompt net prepared to articulate the use of AI in the article or SCU is visible.

Continued...

Section	Criteria	Recommendation
Introduction (continued)	Ethical considerations	Indicate what actions have been taken to reduce bias, misinformation, plagiarism, or bad practices while using AI.
		Indicate what actions have been taken to protect sensitive data (where applicable), such as anonymization. If you have used AI-produced images, indicate whether the input images respect intellectual property and have permission to make derivative work or apply a transformative use
Theoretical Framework	Contextualization	Report which contextualization sources were provided by AI (fair use). If you used AI, you must make it visible in the criteria for use, the definition of the scope, and ethical considerations described in the introduction and in the justification for using this tool.
	Conceptualization	Report which contextualization sources were provided by AI (fair use). If AI was used, you must specify it in the criteria for use, the scope definition, the ethical considerations described in the introduction, and the justification for using this tool
Discussion	Definition	Explain which of the products presented, arguments or systematization of arguments come from the material requested from the IA. If you have prepared tables and figures with AI assistance, mention their use in a note to the table or figure. For example: Note: Prepared with assistance from [Model name, version and date] (Author, year).
		Report if you have requested IA to complement the discussion of your manuscript by considering any of the following dimensions: • synthesize or systematize arguments • contrast differences or compare similarities between the existing evidence and the results found • establish explanatory mechanisms for the findings • complement the elaboration of the discussion
Conclusions	Summary or systematization report	Report if you have asked AI to synthesize or systematize arguments, limitations, and recommendations to complement the preparation of the essay's conclusions.
Disclosures	Disclosure of the use of Artificial Intelligence	Clarify conflicts of interest, disclaimers, and any aspects related to the use of AI. Mention, for example: Artificial Intelligence assisted in this manuscript's research and development process. [Model name, version, and date] was used, and humans mediated its use.

Continued...

Section of the scientific text	Criteria	Recommendation
References	According to APA standards:	Follow the structure below for the reference of the AI model(s) used:
		Algorithm issuer. (year). Model name (month day version) [Language model]. https://...
		For example:
		OpenAI. (2023). ChatGPT (May 21 version) [Large Language Model]. https://chat.openai.com/auth/login
		In the text, mention:
		Authorship (year) or (Authorship, year):
		OpenAI (2023) or (OpenAI, 2023)

¹ See the concepts prompt, initial prompt, second prompt, and supplemental prompt in the definitions section.
² See [Figures 1, 2, and 3](#).

Note: Developed by the authors.

A final reflection: The importance of ethical disclosure and bias mitigation in the use of AI

AI must be integrated into scientific decision-making to benefit all of humanity, ensure the protection of ethical principles, foster development, and advance the common good. Incorrect or inappropriate use can lead to risks that threaten human life and fundamental rights such as access to information, education, privacy of personal data, gender equality, the environment, human dignity, freedoms, and cultural diversity ([Unesco, 2022](#); [Unesco, 2023a, 2023b](#)).

Regardless of our role, whether researchers-authors, reviewers, or editors of scientific journals, we must take an ethical and moral stance towards using AI that mitigates bias and misinformation. In this regard, it is also necessary to know the regulations globally generated by different sectors on this issue. Some of these guiding axes are listed below in chronological order:

- Asilomar AI Principles ([Future of Life Institute, 2017](#))
- The Barcelona Declaration for the Proper Development and Usage of Artificial Intelligence in Europe ([Steels & López de Mantaras, 2018](#))
- Declaración de Montreal para un desarrollo responsable de la inteligencia artificial ([Université de Montréal, 2018](#))

- Iniciativa Global del Instituto de Ingenieros Eléctricos y Electrónicos (IEEE) sobre ética de los sistemas autónomos e inteligentes (IEEE, 2019) and normas IEEE 7000-2021 (IEEE, 2021)
- Directrices éticas para una IA fiable (CE, 2019)
- Propuesta de Reglamento del Parlamento Europeo y del Consejo por el que se establecen normas armonizadas en materia de inteligencia artificial (ley de inteligencia artificial) (CE, 2021)
- Declaration agreed by the countries attending the AI Safety Summit 2023 at Bletchley Park, Buckinghamshire (Government of the United Kingdom, 2023)
- COPE position statement on authorship and AI tools (COPE, 2023)
- The Toronto Declaration. Protecting the right to equality and non-discrimination in machine learning systems (The Toronto Declaration, 2024)

Additionally, Hicks et al. (2024) establish that there are open debates surrounding a core issue on the purpose and use of language models; that is: what is the true nature of the text produced in response to a model? and what is its relationship with the *truth*? In this framework, they establish that a language model is not designed to tell the truth but to produce text that looks like *truth-apt*, that is suitable like the truth, or that resembles it. From this perspective, they argue that the phenomenon called *hallucination* — inaccuracy that is inconsistent with the available data and that suggests that a model is misinterpreting it— is not really a hallucination. Nor is it necessarily true that the models lie deliberately and without accountability, but that they say *bullshit* in the sense developed by Harry Frankfurt, who defines the term as persuading by a reckless disregard for the truth. This single proposition leads to an intense ethical debate about how we humans use the products offered by a language model, how we interpret them, and what our expectations are about them. In this regard, Hicks et al. (2024) remind us of an essential difference between the learning goals of the human brain and those of a large language model: a human mind seeks to learn to meet real needs and improve the quality of life; Large language models aim to replicate —as faithfully as possible— speech, writing, and other forms of human expression.

It should also be noted that since AI is a human creation, resulting biases will be present, and actions must be taken to mitigate them. Below are some situations generated by AI that lead to biases or potential biases but are not necessarily easily visible or detectable in scientific processes (Unesco, 2023a, 2023b):

- Failure to disclose the use of AI and the assistance or type of assistance requested from AI in the different phases of the scientific production, including initial, second, or supplemental prompts. This would imply a lack of transparency in the application of scientific processes and would harm the readers' autonomy and right to decide the use of the findings reported by the authors.

- Differences between actual data compared to others mediated by the use of AI, such as algorithms and mathematical or computer algorithmic systems instructed to perform calculations, tasks, generate content, models, systems, learnings tasks, deductions, patterns, training, predictions, planning, control, perception, programming, representations, recommendations, decision-making or problem-solving, which could cause inaccuracies or search errors, in the generation of results or their interpretation or optimization.
- AI-generated deepfakes (any data created or partially or totally altered such as images, text files, videos, movements, digital traces, hidden geolocation, text messages, and emails), which can affect the quality of the data collected and, therefore, generate unreal, erratic, and biased output.
- Failure to acknowledge the intellectual property of the parties or sources involved. This can hinder the identification or recognition of authorship and the assignment of legal responsibilities in case of damages resulting from the use of AI.
- Obsolescence or irrelevance of data stored and used by AI, not representing the time or interpretation and historical evolution of societies. This could cause inadequate, incorrect, biased, or temporary laggard results in their interpretation or optimization.
- Omission of data anonymization or restriction of some of its uses, which could generate human exposure, bias, discrimination towards social groups, ethnic or racial minorities, increasing inequality, and judgment between humans, as well as limit free and independent participation or injure inalienable human rights.
- Failure to establish strategies for the partial or total elimination of data obtained, managed, or exchanged in an illegal or unethical manner. This would violate international policies and regulations on privacy and data protection –a fundamental human right– in addition to the four fundamental principles of bioethics: justice, autonomy, nonmaleficence, and beneficence and the FAIR principles on open data.
- Failure to disclose human mediation in the approaches used (editorial management, review or refereeing, authorship) when supervising the use of AI in scientific processes. This hinders the identification or assessment of risks in the results obtained or the accountability.
- Contamination of information or cybercriminal attacks that compromise the collected data's integrity, confidentiality, and availability can become a risk to scientifically reported findings' quality and integrity.
- An organization's failure to control and supervise the legitimate use of its production and intellectual property by third parties. Failure to monitor and control could open the door to copyright and intellectual property infringement.

Finally, these guidelines were prepared to direct the work of researchers-authors, editors, and reviewers who have consciously decided to use or support their work with AI. Directing this use towards ethics, transparency, and rigor while engaging in the dynamics of knowledge management related to scientific publication is essential for the reproducibility of knowledge proposed by open science. Aligning the three scenarios — text, review, and editing— aside from representing responsible use helps maintain the consistency of the publishing process. An attempt has been made to classify the scope and emerging uses of AI in scientific journals in such a way that, without hermetically or strictly delimiting its evolution, growth, or transformation—which is impossible from the authors' perspective— its use can be disclosed in scientific communications with a structured mechanism that allows its understanding (explainability). Understanding that we are facing an evolving phenomenon will be key to updating the scopes and orientations of this proposal in the future.

Disclosure of contributions

L.P.C. contributed to the conceptualization of the project, the design of the methodology and the proposed model, and the analysis and implementation of the research process. In addition, she validated the use of the prompt net model, contributed to designing and visualizing the figures, and supervised the draft and final versions of the guidelines. **M.M.C.** contributed to the conceptualization of the project, the design of the methodology and the proposed model, and the analysis of the research process. In addition, she contributed to writing the draft of the guidelines and designing and presenting the figures. **M.A.P.C.** contributed to conceptualizing the project and designing the methodology and the proposed model. In addition, she contributed to writing the draft of the guidelines and designing and presenting the figures.

Data and supplementary material

This article has available supplementary material:

Preprint at <https://repositorio.una.ac.cr/handle/11056/27431>

Spanish version: <https://doi.org/10.15359/ree.28-S.19830>

Disclosure of AI use

No AI was used in the conceptualization or writing of these guidelines.

Gemini (Bard 1.0 Pro, 2024, February 20th to 29th) was used to validate the preparation possibilities of prompt nets within the framework described by these guidelines. Humans mediated its use.

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Guest editor

Dr. Suyen Alonso-Ubieta

Editor of the Journal of Economic Policy and Sustainable Development, CINPE, Universidad Nacional, Costa Rica

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