

## **Research Ethics: Sustainable and Innovative Publication**

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### **Abstract:**

The primary goal of research is to advance understanding, expand knowledge, and contribute to the existing body of information on a subject. Publication ethics are standards of behavior that are usually accepted when publishing the findings of scientific study or other intellectual activity, according to the psychology dictionary. This article discusses various unethical publication practices in research. Also, the role and responsibilities of authors have been discussed with the purpose of maintaining the credibility and objectivity of publication.

**Keywords:-** Ethics, Sustainable, Innovative Plum Analytics, Altmetric, Citations.

### **Introduction**

Research refers to the systematic investigation or inquiry conducted to discover, interpret, or refine knowledge about a particular topic or phenomenon. It involves a process of gathering and analyzing information, examining existing theories or hypotheses, and generating new knowledge or insights. Research can be conducted in various fields such as science, social sciences, humanities, technology, and more.

The primary goal of research is to advance understanding, expand knowledge, and contribute to the existing body of information on a subject. It typically follows a structured approach that includes formulating research questions or objectives, designing a study or experiment, collecting and analyzing data, interpreting the findings, and drawing conclusions. The research process often involves the use of various methodologies, including quantitative and qualitative methods, depending on the nature of the research question and the available resources.

Researchers employ various tools and techniques to conduct their studies, such as literature reviews, surveys, experiments, observations, interviews, and data analysis. They may work individually or collaboratively, and their research findings are usually documented and communicated through research papers, articles, presentations, or other forms of scholarly publications. The outcomes of research can have practical applications, inform policy decisions, drive innovation, and contribute to the overall progress and development of society.

### **Objectives of the study**

Research refers to the act of making information, research, creative works, or other content available to the public through various mediums. It involves the process of disseminating information or works to a wider audience for consumption, review, or distribution. Publications can take various forms, including books, newspapers, magazines, journals, scholarly articles, research papers, reports, brochures, pamphlets,

websites, blogs, social media posts, and more. The purpose of publication can vary depending on the context and content involved. It may serve to inform, educate, entertain, persuade, or share knowledge and ideas.

Publishing involves several steps, including writing or creating the content, editing, proofreading, formatting, designing, and printing or digitally distributing the material. Publishers, whether traditional publishing houses or self-publishers, play a crucial role in the publication process by selecting, curating, and producing content, and making it available to the intended audience. With the advancement of technology, digital publishing has become increasingly popular, allowing for easy dissemination of content through online platforms and electronic devices. This has opened up new avenues for self-publishing and reaching a global audience with minimal barriers.

In academic and research contexts, publication refers to the process of sharing scholarly findings and research outcomes through peer-reviewed journals or conference proceedings. It plays a vital role in advancing knowledge, facilitating academic discourse, and establishing credibility within a specific field or discipline.

This chapter discusses the four fields of innovation that will help to support sustainable development goals, including (traditional) innovation, eco-innovation, social innovation, and the ideal sustainable innovation. This paper aims to help close the distance by introducing a conceptualization which includes four concepts of innovation reviewed from empirical studies, scientific cases, and innovation literature which highlight meaningful recommendations for readers. A decade before this essay was written, the United Nations Commissions and Summits established that sustainable development "meets the needs of the present without compromising the ability of future generations to meet their own needs (Burton 1987, p. 37). Published works by academic researchers and reports from international bodies have expanded the

original definition to describe sustainability as a prosperous or inclusive well-being, a quality of life for all people, now and in the future, which will not reduce with time. More recently, all members of the United Nations have pledged seventeen Sustainable Development Goals (SDGs) since September 2015, which introduce specific goals and timelines to promote international sustainable development, where innovation and the advance in technology stay as the most central (i.e., Goal number 9) among sustainable development targets. Technology is a category of science containing the complete spectrum of tools, methods, and processes that can serve those human purposes both representatively and reliably. At the same time, innovation reflects the stage at which technology is planned, created, codified, and implemented. The innovation mechanism is carried out in multifaceted innovation structures that can be viewed as a linked number of actors and institutional factors that form innovation processes. Innovation would need greater transparency in the design of the multiple innovation stages and an understanding of the obstacles for innovation. It also requires much effort from an abundance of scientific studies and pragmatic practices in order to achieve sustainable growth in general, especially for society and the environment, while continuing to maintain economic implications. Most innovation studies have focused on particular economies, industries, markets, countries, or the advances

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### **Sustainability Research –**

Sustainability research is research and scholarship that explicitly addresses the concept of sustainability, furthers our understanding of the interdependence of ecological and social/economic systems, or has a primary and explicit focus on a major sustainability challenge in technology. Innovation researchers have often suggested that many theoretical system structures to explain the development, transition, and implementation of technology (Amidon 1997; Cassiman and Veugelers 2006). Nonetheless, these studies are infrequent and directly related to the particular challenges encountered by those efforts trying to foster sustainable development. This paper presents four perspectives of innovation from the academia and practitioners that will lead together to the formulation of strategies to boost innovation for sustainable development, including (traditional) innovation, social innovation, environmental innovation, and sustainability innovation. Throughout this chapter, we illustrate a conceptualization of illustrative examples as well as academic literature in order to shape the concrete arguments included.

## **2 (Traditional) Innovations**

The term (traditional) innovation represents innovations This chapter discusses the four fields of innovation that will help to support sustainable development goals, including (traditional) innovation, eco-innovation, social innovation, and the ideal sustainable innovation. This paper aims to help close the distance by introducing a conceptualization which includes four concepts of innovation reviewed from empirical studies, scientific cases, and innovation literature which highlight meaningful recommendations for readers. A decade before this essay was written, the United Nations Commissions and Summits established that sustainable development “meets the needs of the present without compromising the ability of future generations to meet their own needs (Burton 1987, p. 37). Published works by academic researchers and reports from international bodies have expanded the original definition to describe sustainability as a prosperous or inclusive well-being, a quality of life for all people, now and in the future, which will not reduce with time.

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### **Sustainable Innovation**

The final ideal type of innovation is sustainable innovation, which aims to deal with social and environmental challenges. Sustainable innovation is inconsistent with a number of concepts such as “sustainability oriented

innovation” (Hansen et al. 2009; Juntunen et al. 2019) or “socio-ecological innovation” (White and van Koten 2016). Sustainable innovation does not try to enhance a single aspect of a social, environmental, or economic situation (Tello and Yoon 2008); instead a suitable approach must be sought, and concessions can be appropriate among a variety of dimensions to benefit society and the environment, as well as delivering positive economic consequences (Boons et al. 2013; Nguyen et al. 2019). This form of innovation relates to the concept of the triple bottom line and highlights the three foundations of sustainable development: economic, environmental, and social. Currently, social scientists argue that sustainable innovation is difficult to achieve and is also risky, as it is both ambitious (as it needs to satisfy a broader range of stakeholders), and also complicated (due to the conflicting accountability from multiple parties involved) (Harris et al. 2018; Hoang 2018). The current worldwide innovation system has not yet met the demand for the advances in technology and social structure as well as the awareness required by the sustainable innovation (Mattera and Baena 2015; Nguyen et al. 2019). Motivation is broadly used to express both the sustainable innovation and development process to suit the endless demand of end users better or to replace a previous innovation. It is essential that the innovation and technology system that supports sustainable innovation must perform much more than promote other forms of innovation. The technologies must be accessible, well-adapted, and eventually be integrated into different regional contexts that change variably in terms of economies, politics, and

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#### **Sustainable Innovation in Research**

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#### **Publication Ethics in Research**

Innovations Description Related concepts/ components/ examples References (Traditional) innovation. The term (traditional) innovation represents innovations with minor implications for society and the environment. These innovations focus on profit maximization for a group of stakeholders or particular organizations Multiple-disciplinary perspectives (economic, business and organizational) Drucker (2002), Prahalad and Ramaswamy (2004), Crowther and Seifi (2017), and Raimi (2018) Origin of (traditional) innovation Bullinger et al. (2004), Toivonen and Tuominen (2009), and Schot and Steinmueller (2018) Innovation diffusion Rogers (2010), Mahajan(2010), and Kiesling et al. (2012) Environmental innovation Eco-innovations imply new products and processes which provide both the customer and business value while significantly decreasing environmental impacts. This form of innovation focuses strongly on finding a solution for environmental concerns; however, less importance is put on social problems Environmental technology Shrivastava (1995), Grigore et al. (2015), and Kanda et al. (2016) Eco-efficiency Ehrenfeld (2005), Carvalho et al. (2017), and Hoang et al. (2020) Eco-design Knight and Jenkins (2009) and Donnelly et al. (2006) Environmental design Rap

**Publication Ethics** Publication ethics are standards of behavior that are usually accepted when publishing the findings of scientific study or other intellectual activity, according to the psychology dictionary. In general, it is a rule that safeguards intellectual property and prohibits the redistribution of another person's work without due attribution. It also prohibits using someone else's work without their permission. It must be true that the data and information published as original.

• **Publication Ethics are needed to**

1. To maintain high standards of publication,
2. ensure information's accuracy,
3. increase public confidence in publications,
4. obtain due credit for scholarly writing,
5. Properly organize information, and reduce the time required for information retrieval.

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**Methodology:** In order to enforce publishing ethics in the reputable journals, subject-specific specialists and editors are hired on a paid or voluntary basis to serve as editors, reviewers, editors-in-chief, editorial managers, advisory boards, and/or editorial board members. Every employee wants to establish their individual competence so they can meet their objectives and expectations. The following salient characteristics:

1. A research paper's branding
2. To promptly examine publications submitted by authors who are far away;
3. To maintain secrecy and impartiality;
4. To use a software programme to verify all research papers for plagiarism before the review process;
5. To a person with relevant knowledge to send the study submission;
6. To promptly publish articles, news, bulletins, and reports;
7. To promptly answer inquiries from submitters;
8. To deliver publications to authors' exact addresses both domestically and internationally;
9. To charge authors, especially those from impoverished nations, a fair publication fee;
10. Granting reviewers or editorial board members who voluntarily play an honest role possibilities such as free publishing;

11. To offer free or discounted publications to those who cannot afford them; should closely adhere to the research approach; to carefully inspect printing errors;
12. To focus on theoretical research papers rather than personal interviews; and
13. To have knowledgeable academics serve as editors and reviewers of the study report.
14. Naturally, editors should play a crucial role in positioning their journals on a global stage. Editors would adhere to the publication's ethical standards.

In order to generate journals of the highest calibre for the authors, the editorial office's function is crucial. Before the articles are published, the office will examine them very carefully and make very slight edits so that no one will be able to spot even a small error.

- **Editorial Publication Ethics and Policies**

To communicate with readers whose first language is not English, the editorial manager must utilise straightforward and everyday words, phrases, and sentences. While responding to authors' emails, he should attempt to avoid using a convoluted and garish writing style. He should also avoid delaying his reply. While numerous papers are submitted for publication, it is frequently observed that authors are excitedly awaiting publication of their works. Reviewers must adhere to stringent publication ethics and respond promptly in order to preserve a timeline.

- **Title Selection**

The title and the research project must be consistent. 12 to 18 words are typically considered the perfect length for article titles. The choice of a title must be made after consultation with literary or linguistic specialists in order for it to be acceptable and pertinent to the academic community or the interview panel. The contextual title will be chosen by the authors, editors, and reviewers so that it will meet audience expectations.

- **Correction and Revision**

Corrections are frequently needed in research papers for authors who don't have a strong command of English. Clearly, such subpar authors have terrible command of the English language.

- **Resubmission**

To sustain high-quality journals, resubmission is necessary; the more resubmissions, the more essence the journals retain. Many academics and administrators at universities all over the world anticipate further revision by resubmission from the governing committee of the journals. Therefore, the editorial office's action in the case of resubmission is essential to maintaining the reputation of his journals. However, if we look at some predatory or open access journals, we'll find

that articles are published as-is. After careful review, editors must suggest the writers to resubmit the articles. All types of articles must adhere to the resubmission policy. The articles had some small errors that were discovered upon resubmission.

- **Usage of Hi-tech Plagiarism Software Checker**

For checking plagiarised articles, the world is well known for Turnitin or i-Thenticate software. Each editor should utilise a plagiarism detection programme.

- **Integrity, Neutrality, and Confidentiality**

No editorial office can succeed and establish a name for itself in the research sector without having honesty, objectivity, and confidentiality.

- **Publication Fee**

Given that the writers are from underdeveloped nations, the editorial office ought to charge a fair amount for the publication of articles in journals. In the majority of cases, it is discovered that the editors-in-chief, despite accepting the research article for journal publication, impose numerous fees on the authors, which they are unable to pay because of the current economic situation. The editorial office should very kindly enforce publishing ethics in such cases. It is undeniable that authors in developing countries receive extremely low pay. They must maintain their lives and struggle to make a living with this pay.

- **Remuneration**

One of the key concerns for the editorial office is compensation. Because they must support their families, children, and routine costs on a very meagre wage, reviewers and editors in underdeveloped nations should be compensated.

- **Timing of Publication**

The editorial office's ability to control publication timing is essential to every journal's publication process. Editors must adhere to the deadline policy extremely tightly in order for writers to receive their published research paper on schedule.

1. **Measures based on citations**

These metrics use article citations as the benchmark for assessing the significance of research. Citation metrics can be used to assess specific researchers, centers/departments, organisations, fields, nations, and other types.

Citation measures have drawbacks, such as their susceptibility to "gaming," inability to fully account for differences between disciplines and publications, and propensity to prioritise theoretical over applied research.

2. **Citations from Google Scholar**

You may monitor citations to your articles, find out who is citing them, chart citation trends, and more.

### **3. H-index**

The number of an author's publications that have been mentioned at least that many times (h) are used to generate the H index, an author-level indicator. offered through Google Scholar. H-core is a collection of a journal's most frequently referenced h articles, among other h metrics. H-median is a publication measure that represents the median citation counts in a journal's h-core, h5-index, h5-core, and h5-median metrics for articles published in the last five years.

### **4. Impact Factor**

The number of citations to articles published in the two years prior, divided by the total number of articles published, is a journal's impact factor. owned and managed by Thomson Reuters/Clarivate Analytics as a proprietary designation. accessible through Web of Science.

### **5. SCImago Journal Ranking**

SJR rates journals based on their average prestige per publication, much like Google PageRank. Citations and journal prestige are also considered in SJR calculations. Based on data from the Scopus database; freely accessible. developed by a research team from the University of Granada, Carlos III (Madrid), Alcalá de Henares, Extremadura, and Consejo Superior de Investigaciones Científicas (CSIC).

### **6. Source-Normalized Impact per Paper (SNIP)**

Reflects differences in citation practises between disciplines and measures the average citation impact of a journal's article. according to Scopus data. produced by Leiden University's Centre for Science and Technology Studies.

### **7. Eigenfactor Score**

Counts the number of times in a year that a journal's articles have been mentioned. Size is weighed; larger journals receive higher ratings. at the University of Washington, which was developed.

### **8. CiteScore**

CiteScore metrics determine a title's citations from every document published in the first year to every document published in the three years prior. Elsevier created the item. based on information from Scopus.

### **9. Altmetric**

The term "altmetrics" refers to a set of metrics that go beyond typical citation counts to gauge the effect and scope of scholarly research outputs. Altmetrics, as opposed to conventional metrics like citation counts, consider a variety of digital sources, including social media mentions, downloads, views, and bookmarks. In the digital age, altmetrics offer a more comprehensive and rapid perspective of the impact of research.

### **10. Plum Analytics**

Plum Analytics was acquired by Elsevier a leading global provider of scientific technical and medical information products and services. Plum analytics provides tools and services to help institutions researcher and publishers track and analyze their impact of their research outputs.

In this analytics all the data gathers forms of scholar publications and organizes it into categories based on usage, mentions, captures, social media, and citations. Products specifically designed for institutions, institutional repositories, research groups and departments, and research funders. To measure the impact and reach of scholarly research beyond traditional based matrices.

### **11. Impact story**

Uses information from citations, social media, data and code repositories, and other sources to track and score all research outputs. a connection to a user's ORCID profile. Twitter accounts that are free.

### **12. Research Gate Score**

Research Gate, a social networking site for academics, assigns users a grade depending on how their peers perceive their efforts. Publications, data, and other things can be contributions. The RG score of the researcher rating research work of researcher weighs your own RG score.

#### **• Responsibility of Author**

Authorship is not just a list of names. It is the matter of pride that has to be deserved, earned, and declared. To maintain the integrity and credibility of medical research and to nourish the trust of public in scientific endeavors, all authors must follow the rules of good scientific publication practice and should stick to the following responsibilities

1. Do not fabricate or manipulate the data
2. Avoid plagiarism and give proper citation to others works
3. Decide the order of authorship prior to writing the paper to avoid future conflicts
4. Declare whether research work has been published or presented before
5. Declare COI
6. Avoid ghost/gift/guest authorship
7. Do not submit the manuscript to more than one journal for simultaneous consideration

#### **Conclusion:-**

To prevent unethical practises in the publication scientific research scholarly articles article writer should follow proper guidelines or SOP of the journal. Article writer should actively participate in research work and avoid the unethical practices in research publication. Analysis of research productivity and the number of citations

received by publications included in the sample confirm the growing interest of the academia in research on responsible and sustainable innovations.

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9. International, national, and local institutions play a vital role in shaping the extent to which sustainable innovation improves a human's well-being. Institutions are considered as the sets of beliefs, expectations, rules, norms, and decision-making processes that manage the actor interactions (Halme et al. 2016; Hoang et al. 2020).
10. Previously, innovation has been promoted through different channels, including research grants, patent laws, and research networks, both nationally and internationally (Sharma 2017). Those efforts have many influences on the success of normal technological innovation projects but still failed to meet the request for advancing sustainable innovation (Hoang et al. 2020).
11. A trend of unequal and ineffective sustainable innovations is partly due to many divergent factors. Firstly, many innovations have externalities that exceed the influence of corporations or individual country-states and are thus susceptible to free-rider problems which result in under-production by both markets and national technological innovation processes. Secondly, developing countries tend to offer a relatively small number of business opportunities to private entrepreneurs when compared to developed countries (Sharma 2017).
12. They have also promoted low- efficiency national innovation programs to facilitate domestic technological developments, resulting in fewer or improperly adapted technological advances being ready for use in other countries (Mahmoud and Hinson 2012).
13. Finally, although innovation incentive programs are used to encourage scientists and innovators, the funding for these is still low compared to the total cost of the grants needed to promote sustainable innovations (Donnelly et al. 2006).
14. As a result, high invention costs can hinder access to better technology for societies most in need, including Drugs, the off-grid supply of energy and waste treatment devices.
15. Addressing these problems needs effective local, national, and global institutional frameworks. Such problems of harnessing technical advancement for sustainable growth have started to be tackled in recent years through a number of interventions and supports within the global advancement schemes.
16. Examples include funding mechanisms, scientific development networks, priority-setting procedures, initiatives to promote continued use and universal access to technology, international assistance and trade agreements, and feedback mechanisms linking end users and innovators/connectors (Sharma 2017). Such interventions have, in general, altered the laws, standards, resources, and organizational structures that form the actions of the actors involved, including government bodies, private companies, investigators, and end users.
18. Although many new innovative approaches have been piloted in a large variety of fields over the past decade, they are mostly poorly understood, unknown within their respective sectors, and thus not responding to the awareness or enhancement of the worldwide innovation mechanism for sustainable development as much as they could.
19. Understanding of what is likely to work is either incomplete or scattered across various industries, so that the global technical innovation mechanism remains underachieving

with respect to its capacity or the need for global sustainability innovation (Mattera and Baena 2015; Halme et al. 2016) (Fig. 1).

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