Whether evaluation and marking citations are necessary and possible? – on OSH examples

29th Nordic Workshop on Bibliometrics and Research Policy, 20-22 November 2024, Reykjavik, Iceland

CIOP PIB
Witold Sygocki
Central Institute for Labour Protection –National Research Institute
Czerniakowska 16, 00-701 Warsaw, Poland
witold.sygocki@gmail.com

UNIVERSITY OF SILESIA IN KATOWICE
Aneta Drabek
University of Silesia in Katowice
Bankowa 12, Katowice 40-007, Poland
aneta.drabek@ciniba.edu.pl

Abstract

This poster aimed to answer several questions and contribute to the discussion about evaluating and marking citations. Can and should citations be assessed and marked as neutral (e.g., published first, statistics, regulations), positive (e.g., first, essential research), or negative (e.g., polemics, misinterpretation)? We used 50 articles on OSH (occupational safety and health) published in 2023. As a result, manual analysis of English articles found 747 citations; some articles were cited more than once (cited 937 times), and 25 Polish articles were 504 citations – as before, cited more than once (654 in total). In all articles, the cited information was neutral, with no positive or negative connotations. The poster proposes a visualization of how citations are marked in journal websites and databases by colour: green – positive, yellow – neutral, and red – negative. Isn't citing publications when millions have been published a positive classification? The poster presents another suggestion resulting from the use of artificial intelligence (AI) to evaluate citations.

Keywords: evaluation, citations, publications, artificial inteligence AI

Methods:

Manual analyses 50 articles published in 2023: 25 English – indexed in WoS CC, 25 Polish – indexed in CEJSH
AI analyses of English articles: 25

scite_ | Search by title, author, keywords or DOI

RQ. 1. Who might be interested in evaluating and marking citation quality?

- Institutions, publishers, scientists who are not afraid of evaluation.

RQ. 2. Are negative citations not related to scientific progress, so are they necessary?

- Different situations in disciplines – in science and humanities and social sciences and in computer science.
- The author was wrong or simply had different views on aspects the matter, knowledge.

RQ. 3. Who can mark citations: author, publisher, other researcher, ... AI?

- Examples of how citations can be marked – prepared by the authors of the poster

MARKING BY AUTHOR IN ARTICLE

REFERENCES (47)
1. Achkir, A., Aouragh, A., El Mahi, M., Lotfi, E.M., Labjar, N., EL Bouch, M., Ouahidi, M.L., Badza, T., Farhane, H., EL Moussaoui, T., 2023. Implication of sewage sludge increased application rates on soil fertility and heavy metals contamination risk. Emerging Contaminants 9, 100200. https://doi.org/10.1016/j.emco.... CrossRef Google Scholar

2. Aleisa, E, Alsulaili, A, Almuzaini ,Y., 2021. Recirculating treated sewage sludge for agricultural use: Life cycle assessment for a circular economy. Waste Management 135, 79–89. https://doi.org/10.1016/j.wasm.... CrossRef Google Scholar

3. Antonious, G.F., 2020. Bioaccumulation of Trace Metals in Plants Grown in Sewage Sludge Amended Soil. International Journal of Applied Agricultural Sciences 6(5), 124–134. https://doi.org/10.11648/j.ijа.... CrossRef Google Scholar

4. Antonkiewicz, J., Kowalewska, A., Mikołajczak, S., Kołodziej, B., Bryk, M., Spychaj-Fabisiak, E., Koliopoulos, T., Babula, J., 2022. Phytoextraction of heavy metals after application of bottom ash and municipal sewage sludge considering the risk of environmental pollution. Journal of Environmental Management, 306, 114517. https://doi.org/10.1016/j.jenv.... CrossRef Google Scholar

USE AI TOOL - SCITE AI - TO ANALYSE REFERENCES scite_

- Only references with DOI to get result.
- Scite AI report is not complete (no records without DOI). Results of manual and AI analysis cannot be compared.

Scite AI - another way to mark citation features

supporting	mentioning	contrasting	unclassified
35	565	0	525

RQ.4. Is the same paper possibly cited as neutral and negative?

- The same paper can be cited as neutral and negative – so this situation is possible.

DATABASE PUBLISHER_E.G. SCOPUS

☐ 2	Article					
	Artificial intelligence in the work process. A reflection on the proposed European Union regulations on artificial intelligence from an occupational health and safety perspective	Jarota, M.	Computer Law and Security Review	2023		6
			, 49, 105825			4
	Show abstract ⌄ View at Publisher ↗ Related documents					1
						1

DATABASE PUBLISHER_E.G. WoS CC_CITED REFERENCES

73 Cited References

Environmental Management

2015 | ISO 14000
International Organization for Standardization, Geneva, Switzerland

Search my library catalogue

71 Citations   **71** **0** **0**

0 References

EXAMPLE OF ONE OF THE RECORDS – REFERENCED 2 TIMES

Occupational Hazards and Diseases Related to the Practice of Anesthesiology
Volquind[1], Bagatini[2], Monteiro[3] et al. 2013
Brazilian Journal of Anesthesiology

📑 21 ⊘ 0 ✓ 14 ⓘ 0

View full text   Add to dashboard   Cite   Open Access

show abstract

This publication is **referenced 2 times** (2 mentioning references).

See how it was used

HOW IT WAS USED

"…The Health and Occupation Research Network (THOR) stated needle-stick injuries, musculoskeletal injuries, and noise-induced hearing loss are more prevalent among the HCWs. 7 It is imperative to follow precautionary measures to prevent injuries related to routine work. A study conducted by Nicholau et al assessed preventive strategies and reported 49% of HCWs did not follow proper precautionary measure including gloves, proper recapping, and disposal of syringe after phlebotomy procedure…"

Section: Discussion   ⊘ mentioning   confidence: 99%

"…Inhale anesthetic upper limit in the environment is considered to be 25 parts per million (ppm) for nitrous oxide and 2 ppm for the halogenated agent. 7, 8 About 33million people per year operated in OT need million anesthetist which is exposed to volatile anesthetics. 9 DNA damage, headache and dizziness has been reported due to chronic exposure to the waste anesthetic gases…"

Section: Introduction   ⊘ mentioning   confidence: 99%

Knowledge and safety practices on occupational hazards among operating room staff in Mardan Medical Complex, Mardan, Pakistan
Amin[1], Ali[2], Shahzeb[3] et al. 2023 *Anaesth, pain intensive care*

View full text   Add to dashboard   Cite   Open Access

Summary

- OSH examples – all citations are neutral, difference is possible in different "disciplines", e.g. medicine and technical science.
- The results can be correlated with the specificity of the OSH discipline.
- Older publications may give different results.
- In OSH publications, information is presented as results, without discussion.
- There may be more negative citations in polemical texts and reviews.
- Another question about differences in articles from a few decades ago – then there was time for discussion.

The author plans to broaden its scope