

NAVIGATING MISINFORMATION: THE CONTRIBUTION OF HIGHER EDUCATION TO CRITICAL THINKING DEVELOPMENT IN THE POST TRUTH ERA

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Abstract The aim of this research is to analyze the role of higher education institutions in developing critical thinking skills in the post-truth era, where misinformation and difficulties in identifying objective truth pose significant challenges. Using bibliometric methods, this study explores academic publications related to the role of universities in countering the adverse effects of the post-truth era. The data analyzed includes journal articles, books, and conference proceedings published over the past decade, focusing on publication trends, author collaborations, and institutional contributions in this field. The analysis results indicate that research on the role of universities in the post-truth era began to be examined starting in 2017 and has continued to increase until now. The countries most extensively studying this theme are the United States and United Kingdom, with 56% of their studies originating from social sciences. This topic is highly intriguing and needs further exploration within other scientific fields such as psychology, health, and communication given that global societal challenges with technological advancements demand a more critical approach to receiving and processing information. Academics and scientists at universities are expected to strengthen their roles by providing scientific truths and raising public awareness for more critical information processing. Further studies are needed to explore these findings across various disciplines so that universities can maintain their role as academic centers for scientific truth into the future while translating anticipatory measures into policy actions.

Keywords: higher education, university, social media, hoax, fake news critical thinking, post-truth era, bibliometrics

Introduction

The post-truth phenomenon, characterized by the dominance of subjective narratives over objective facts, has created significant challenges for modern society (Sharine & Sitorus, 2024; Verstyn, 2024). In this context, universities are expected to play a role not only as educational institutions, but also as the frontline in promoting accurate and critical knowledge (McLean, 2015; Thapar, 2021). This article aims to explore the strategic role of higher education in facing the challenges of the post-truth era through a bibliometric approach. By using the bibliometric analysis produced by Vosviewer, this paper shall perceive the aforesaid patterns, links, and main topics concerning higher education's contribution within this setting.

Post-truth is defined by Oxford Dictionaries as “a situation in which objective facts are less influential in shaping public opinion than personal emotions and beliefs” (Oxford Dictionaries, 2016).

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Henceforward, it altered how people communicate and share information. The Concept sharpened during Brexit Referendum and US Presidential Election (Dieguez, 2017; Hendricks & Vestergaard, 2019). Post-truth politics considers an approach to manipulate reality where truth stands equal with untruths (Modreanu, 2017; Niño González et al., 2017). It is marked by the use of euphemisms and a disposition to minimize untruths (Modreanu, 2017). The phenomenon does not limit itself within the bounds of the U.S. and UK but is progressively globalizing, as illustrated in the discussion related to the Adani Carmichael mine in Australia (Brevini & Woronov, 2017). Herein, misinformation and manipulation proliferated by social media have led to opinion polarization alongside waning levels of faith toward all types of institutions — universities included (Lazer et al., 2018).

A university has a very profound social responsibility in the generation of a society that can think critically and analyze information. Being knowledge-producing institutions, universities act as research centers through which there is great potential to contribute toward better understanding complex issues facing society (Hincapié-Úsuga et al., 2023; Vessuri & Teichler, 2008). In such a situation, having a research university is vital for developing countries to have a place in the global knowledge economy and run with positive momentum of increasing economic growth support (Altbach, 2011, 2013). This however creates quite an alarming problem with keeping up with their role as traditional higher education while being demanded by the knowledge society (Snellman, 2015). The financial pressure puts them against their social justice mission (Gaventa & Bivens, 2014) and struggle to find avenues for their research to be applicable to critical societal issues (Ansley & Gaventa, 1997). Furthermore, higher education can be an opportunity to cultivate media literacy and critical thinking skills, which are crucial in confronting the post-truth era (Mihailidis & Thevenin, 2013).

Higher education faces significant challenges in the post-truth era, characterized by widespread misinformation and declining trust in expertise (Parker, 2024). Civic engagement and democratic values are impacted by the educational system's inability to teach students how to distinguish between truth and falsity (Patrinos, 2021). Research indicates that current methods may not be enough to promote critical information literacy, even though some institutions are incorporating digital technologies and case-based learning (Amir et al., 2025). According to a Ukrainian study, economics students without media literacy instruction were no more adept at telling fact from fiction than journalism students, even those with fact-checking training (Yevtushenko et al., 2022). Higher education needs to concentrate on enhancing research communication, creating communities that promote knowledge trust, and fostering the development of both cognitive and non-cognitive skills to equip students for the intricacies of the post-truth society in order to meet these challenges (Parker, 2024; Patrinos, 2021).

The application of certain critical thinking frameworks within structured educational environments has provided a good starting point for fostering this vital skill. The Safe Care Framework™ aids nursing students in accumulating and prioritizing patient information, enhancing their judgment and communication through the use of concept maps and prioritization tools (Hundial, 2020). The misinformation issue is approached by Faix & Fyn with the ACRL Framework whose concepts cover information literacy as a comprehensive framework that incorporates several other frameworks rather than relying on one singular approach (Faix & Fyn, 2020). Addressing ambiguity about how critical

thinking should be taught with an operational framework (Thomas & Lok, 2015). This proposed system has potential but shows difficulties in creating, implementing, and designing assessments that focus on critical thinking skills (Liu et al., 2014). The effectiveness of this framework in combating misinformation directly is not addressed in various related studies which indicates the need for more investigation in this direction. There are gaps in the literature regarding how effective a particular framework would serve to combat misinformation considering it lacks discourse or stated conclusions.

This study applies bibliometrics to establish the background of research related to the research questions and offers an objective way to measure scientific productivity (Zupic & Čater, 2015). It allows scholars to systematically analyse large volumes of bibliographic records, thereby providing researchers with knowledge of research trends, leading authors and publication trends (Basílio et al., 2022; Linnenluecke et al., 2020). With the aid of technology, for example Vosviewer, researchers are able to discern patterns, trends and relationships across articles, authors and keywords within a certain context (De Jong & Bus, 2023; McAllister et al., 2022). Bibliometric methods are used in study because they give a useful tool to measure and analyze the effect and quality of science papers (Eri Mardiani et al., 2023). Using signs like number of quotes and h-index, researchers can check the impact of their work in the school group (McAllister et al., 2022). Also bibliometrics help in finding current study trends and mapping new topics thus let researchers find less looked into areas (De Jong & Bus, 2023). This way also helps with rules making for study by giving info that can be used for smart choices and resource sharing (Kirby, 2023). Also, bibliometric study helps find chances for working together and research groups, while it aids in checking how much researchers work and how well they do. This makes it a key tool for managing and growing research. In this piece, bibliometric study will be used to look at the role of universities in the post-truth time (Ellegaard & Wallin, 2015).

Method

This research uses bibliometric methods to answer the research questions. Bibliometric analysis is one of the quantitative literature evaluation frameworks that measures the outcomes and impact of research (Durieux & Gevenois, 2010). Using mathematics and statistics, it analyzes publications, authors, and relevant fields that yield insights that are important for funding, promotion, and career progression (Durieux & Gevenois, 2010). According to Passas (2024), this methodology consists of key stages such as data collection, data cleaning processes, and the application of various bibliometric approaches. In general, bibliometric or quantitative methods allow for a thorough exploration of scientific data through advanced processing that reveals trend patterns and impact graphs within a specific field or theme (Passas, 2024).

Data for the bibliometric analysis were taken from Scopus database using search phrases made to find useful articles: “higher education” AND ‘post-truth’ OR ‘post truth’. Rules for including articles had those published from 2014 to 2024, must be in english language, and focused on studies that looked at the part of higher learning in post-fact setting. Scopus was chosen as the main data source because it is a well-known database in publishing research results from various countries in the world and offers a variety of peer-reviewed articles so that the quality of the articles is considered more guaranteed (Patra et al., 2022). The database from Scopus was extracted to obtain information on research growth patterns, the most productive authors, countries with the most publications, types of publications, and

the most cited journals to be analyzed as needed. While visualization and analysis of research trends from downloaded article data in CSV format using vosviewer 1.6.18. Vosviewer can also help researchers to get keyword maps based on the main networks. Bibliometric analysis was conducted using Vosviewer, which allows visualization of keyword, article and author networks. This tool provides a clear picture of the relationships between elements in the analyzed literature, as well as identifying central trends and themes. The data analysis process went through the following stages:

1. Data Search: Using search queries on Scopus to collect relevant articles.
2. Data Extraction: Collected key information from the articles, including title, abstract, keywords, authors, and year of publication.
3. Network Analysis: Using Vosviewer to generate network graphs depicting the relationship between keywords and articles.
4. Interpretation of Results: Analyzed the network graph to identify trends, relationships and central themes.

Results

The keyword network graph generated from Vosviewer shows some key themes relating to the role of universities in the post-truth era. Scopus found 1783 article documents in the initial keyword search result.

Distribution of research by year, country of origin, and field of study

Since this study aims to map the overall development of the theme of post-truth and higher education, the publication search period was limited to the last 10 years because post-truth itself only started to be studied after 2014 and has continued to increase until now by being associated with other themes from various fields of study. Our findings show that the first article linking post-truth with higher education was found in 2017, as shown in Fig. 1.

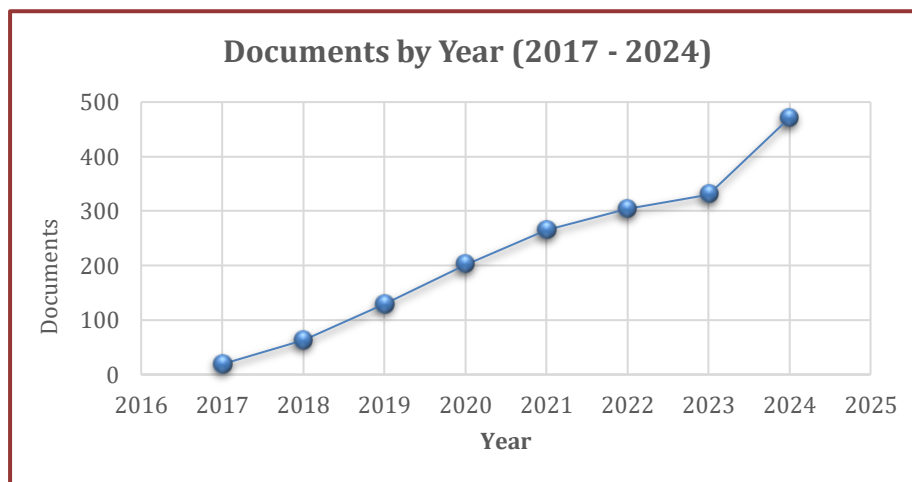


Figure 1: Trend research of post-truth and higher education (source: Scopus)

Prior to 2017, no one linked this theme but since the word began to be popularized by the oxford dictionary, publications linking post truth and higher education have continued to increase since 2017 and continue to increase until 2024. The biggest increase occurred in 2023 (330 documents) to 2024 (to 471 documents). This happened because the word post-truth was widely used in connection with the brexit event and the election of donald trump as president of the United States in 2014 along with the increase of fakenews and hoaxes in digital media until then the oxford dictionary placed the word “post truth” as the word of the year in 2016. The word post-truth is then associated by researchers globally with various themes that are widely discussed at that time such as political, social, academic, health, information, psychology, and other events and continues to increase to this day because it is considered a new study and relevant to the current context.

Based on the country that researched, post-truth associated with higher education is most researched by the United States with 519 articles and followed by the United Kingdom with 249 articles as shown in Figure 2.

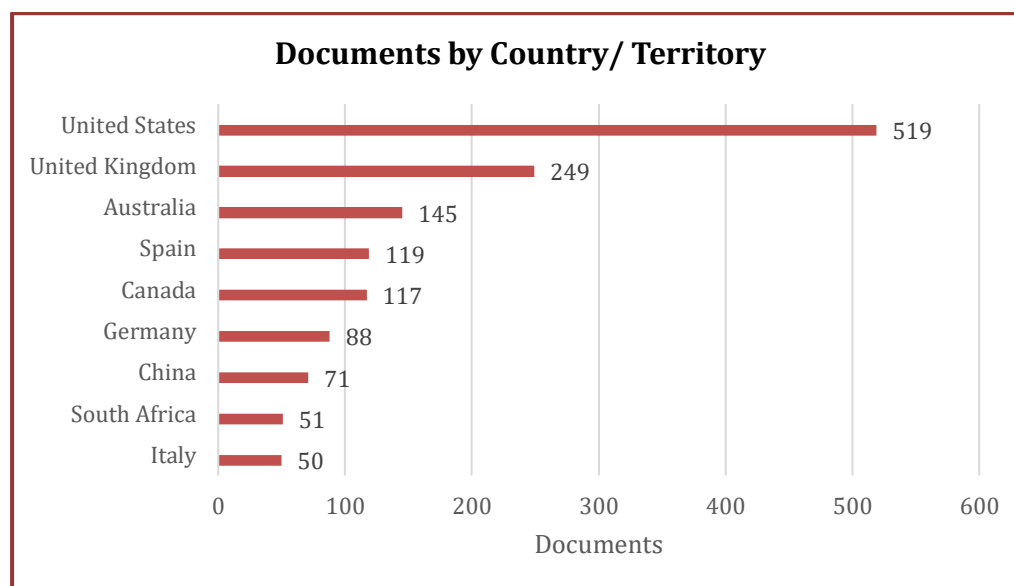


Figure.2: Documents by Country/ Territory (source: Scopus)

Social science is the area that has most studied the function of universities in the post-truth era. 53% of the research that has been done on this topic has been studied in these sciences, followed by 14% from arts and humanities. Despite being in third place, psychology apparently only accounts for 8% of the total research that has been done on related topics, so the opportunity to look at the function of universities in the post-truth era from a psychological perspective is still very much needed. The same goes for other fields such as computer science (7%), business management (6%), environmental

science (4%), medicine (3%), economics (3%). The distribution of research according to the area of study can be seen in figure 3.

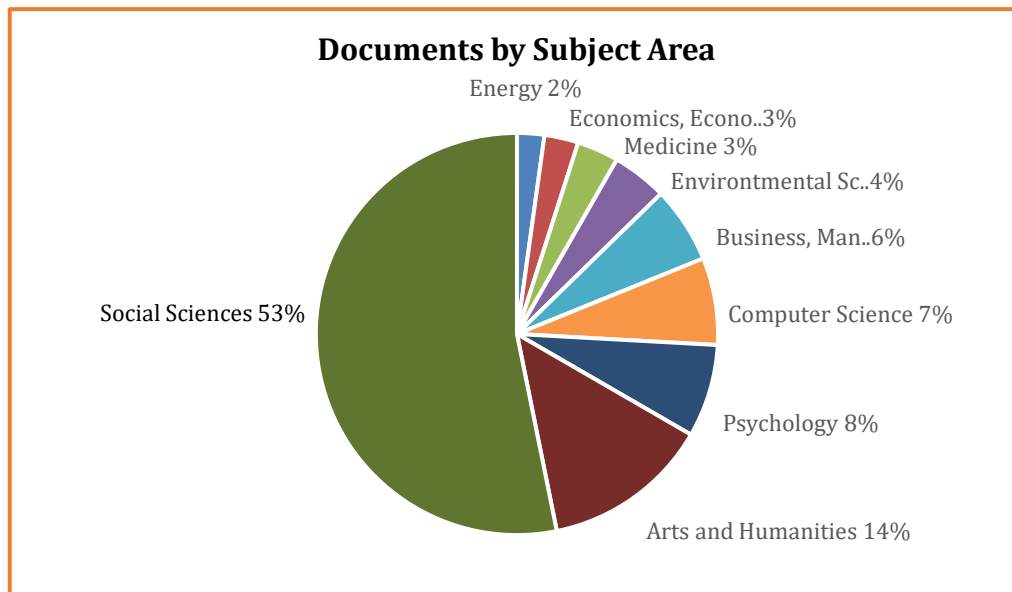


Figure 3: Documents by Subject Area (source: Scopus)

Topic area visualization based on vosviewer

Vosviewer's default rendering for keywords associated with the post-truth and higher education themes is a circle. The wider the circle, the more frequently the object or keyword appears, the more significant it is. The frequency of appearance influences the object's size. Based on the visualization obtained from vosviewer; post-truth, social media, fake news, covid-19, higher, education and neoliberalism the topics that most often appear in research when we associate post-truth with higher education and the center of every clusters.

Out of 5254 keywords, only 112 met the criteria and were then further analyzed through vosviewer. The keywords are then sorted into 6 clusters. As expected “post-truth”, “higher education” and “social media” were the most emphasized terms not only in cluster 1 or 2 but also throughout the network. The visualization in Figure 4 shows the relationship between the 6 clusters and the problem areas evaluated. The structure of the map shows that each cluster consists of many keywords that correspond to each other. In addition, high-frequency occurrences of keywords represent the focus of previous research for each cluster. The top three clusters that appear most frequently in three keywords: post-truth, higher education and social media.

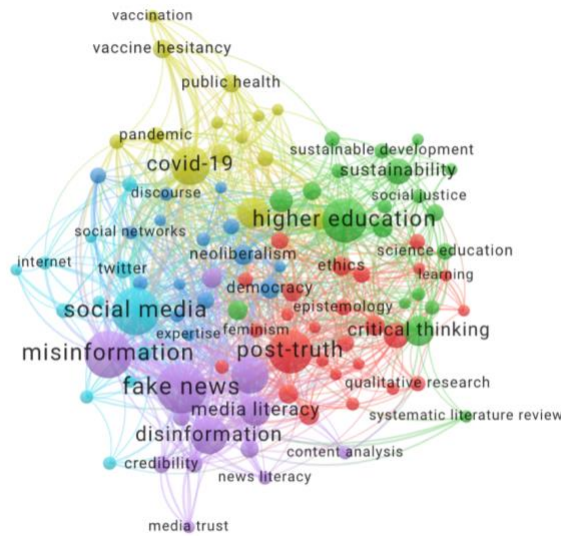


Figure 4: Visualization all cluster (source: Vosviewer)

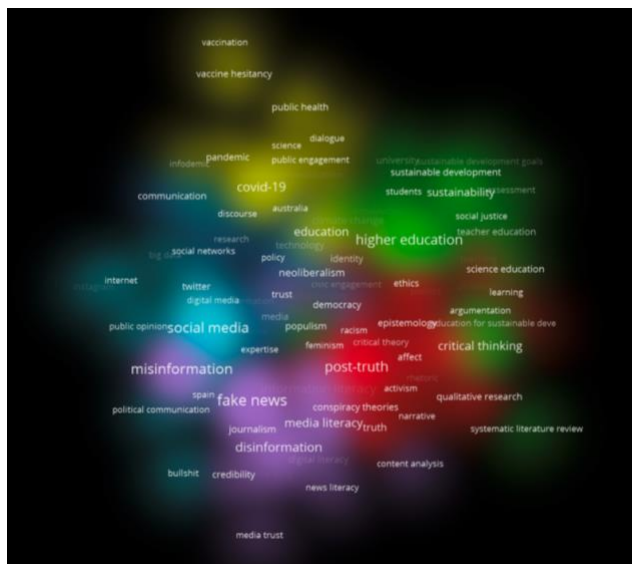


Figure 5: Density Visualization (source: Vosviewer)

Based on Figure 5, it is known that the study of post-truth is often associated with misinformation, fake news, which in many studies is mentioned as an indicator of the era. Meanwhile, when associated with the role of universities, the post-truth era is often associated with education, social justice and critical thinking as skills that must be developed to counter the adverse effects of the emergence of this era (see figure 6). Other themes emerge when the keyword is discussed in other studies that show efforts to find anticipatory steps from the various impacts of post-truth that have been discussed previously. However, critical thinking is the most relevant word and is most often discussed by researchers as a solution to deal with the adverse effects of the emergence of this era so that studies related to this are needed in the future.

Discussion

Combating misinformation is a formidable challenge for both academia and society. A bibliometric analysis conducted by Vijayan et al., 2025 shows that misinformation studies in India soared with the onset of major elections and COVID-19 pandemic, post 2016 global event. Internationally, there seems to be interest within educational psychology and medical education concerning "media literacy" or "digital literacy," regarded as essential skills (Ha, 2024). The work on misinformation has drawn contributors from more than 1,200 different fields which demonstrates a truly multidisciplinary characteristic of the problem (Nguyen et al., 2023). Other critical areas include investigating how misinformation spreads and what impact it has, developing methods to detect and correct it, detecting policy gaps and remedying them on educational fronts. Addressing these issues reveals a wider need to deal with the global ramifications of misinformation (Nguyen et al., 2023; Vijayan et al., 2025). From my perspective interpreting this data made me realize how profound university strategies are toward encouraging analytical insight within the academic community during counteraction dealing with the negative impacts of post-truth era misinformation.

Conclusion

Our study reviews the latest developments on how universities relate to the post-truth era. The United States and the United Kingdom are the countries that emphasize the importance of universities playing a more optimal role in shaping a more critical society in processing various information in today's social media where lies and truth are difficult to distinguish. We conclude that further studies are needed on what kind of critical thinking model should be developed by universities, especially in the setting of higher education organizations so that the academic community can be the most instrumental party in shaping a more critical society in the future and remain the center of providing scientific truth for the global community. Evaluation of the effectiveness of the current curriculum in higher education and the need for a public campaign about the importance of critical thinking in facing post-truth conditions to counter the spread of misinformation needs to be carried out and explored further as a direction for future research.

Limitation

This study only uses one database, namely Scopus, which raises the issue of research data sources. Even so, the selection of Scopus itself has gone through much consideration by the research team because many sources mention the advantages of this database compared to others. Scopus is a large bibliometric database with complex data sets, extensively used for various academic evaluations because of its comprehensive coverage and meticulous data curation (Baas et al., 2020). Unlike traditional databases such as Science Citation index, Scopus provides broader journal coverage, along with advanced and specialized analysis tools (Ball & Tunger, 2007). For PubMed and Web of Science, AlRyalat et al. 2019) noted that Scopus outperforms all other databases by providing the largest number of documents in most bibliometric searches emphasizing outcomes evaluation. Even with such limitations outlined above, it remains an undeniable fact that Scopus serves as a valuable instrument

regarding large scale research assessment, landscape studies and even university rankings by offering controlled free data access for certain defined academic studies (Baas et al., 2020).

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Reference

- AlRyalat, S. A. S., Malkawi, L. W., & Momani, S. M. (2019). Comparing Bibliometric Analysis Using PubMed, Scopus, and Web of Science Databases. *Journal of Visualized Experiments*, 152. <https://doi.org/10.3791/58494>
- Altbach, P. G. (2011). The Past, Present, and Future of the Research University. In *The Road to Academic Excellence* (pp. 11–32). The World Bank. https://doi.org/10.1596/9780821388051_CH01
- Altbach, P. G. (2013). Advancing the national and global knowledge economy: the role of research universities in developing countries. *Studies in Higher Education*, 38(3), 316–330. <https://doi.org/10.1080/03075079.2013.773222>
- Amir, R., Putri, A. R., Zaini, S. N., & Batubara, T. (2025). Pendidikan Pancasila dan Ketahanan Informasi di Era Post-Truth. *Polyscopia*, 2(1), 34–41. <https://doi.org/10.57251/polyscopia.v2i1.1559>
- Ansley, F., & Gaventa, J. (1997). Researching for Democ & Democratizing Research. *Change: The Magazine of Higher Learning*, 29(1), 46–53. <https://doi.org/10.1080/00091389709603114>
- Baas, J., Schotten, M., Plume, A., Côté, G., & Karimi, R. (2020). Scopus as a curated, high-quality bibliometric data source for academic research in quantitative science studies. *Quantitative Science Studies*, 1(1), 377–386. https://doi.org/10.1162/qss_a_00019
- Ball, R., & Tunger, D. (2007). Science indicators revisited – Science Citation Index versus SCOPUS: A bibliometric comparison of both citation databases. *Information Services & Use*, 26(4), 293–301. <https://doi.org/10.3233/ISU-2006-26404>
- Basílio, M. P., Pereira, V., Costa, H. G., Santos, M., & Ghosh, A. (2022). A Systematic Review of the Applications of Multi-Criteria Decision Aid Methods (1977–2022). *Electronics*, 11(11), 1720. <https://doi.org/10.3390/electronics11111720>
- Brevini, B., & Woronov, T. (2017). Nothing but Truthiness: Public Discourses on the Adani Carmichael Mine in Australia (pp. 147–159). https://doi.org/10.1007/978-3-319-57876-7_12

- De Jong, R., & Bus, D. (2023). VOSviewer: putting research into context. Research Software Community Leiden. <https://doi.org/10.21428/a1847950.acdc99d6>
- Dieguez, S. (2017). Post-vérité. Cerveau & Psycho, N° 88(5), 56–59. <https://doi.org/10.3917/cerpsy.088.0056>
- Durieux, V., & Gevenois, P. A. (2010). Bibliometric Indicators: Quality Measurements of Scientific Publication. Radiology, 255(2), 342–351. <https://doi.org/10.1148/radiol.09090626>
- Ellegaard, O., & Wallin, J. A. (2015). The bibliometric analysis of scholarly production: How great is the impact? Scientometrics, 105(3), 1809–1831. <https://doi.org/10.1007/s11192-015-1645-z>
- Eri Mardiani, Waqiah, Saununu, S. J., & Zani, B. N. (2023). Analyzing the Global Visibility and Influence of Social Enterprise Research: A Bibliometric Review of Citation, International Collaboration, and Cross-Cultural Perspectives. West Science Interdisciplinary Studies, 1(08), 576–586. <https://doi.org/10.58812/wsiv.1i08.182>
- Faix, A., & Fyn, A. (2020). Framing Fake News: Misinformation and the ACRL Framework. Portal: Libraries and the Academy, 20(3), 495–508. <https://doi.org/10.1353/pla.2020.0027>
- Gaventa, J., & Bivens, F. (2014). Co-constructing Democratic Knowledge for Social Justice: Lessons from an International Research Collaboration. In Social Justice and the University (pp. 149–174). Palgrave Macmillan UK. https://doi.org/10.1057/9781137289384_8
- Ha, S. (2024). Analyzing International Research Trends on Misinformation in Education Using R Programming. Korean Association For Learner-Centered Curriculum And Instruction, 24(24), 123–142. <https://doi.org/10.22251/jlcci.2024.24.24.123>
- Hendricks, V. F., & Vestergaard, M. (2019). The Post-factual Democracy. In Reality Lost (pp. 103–117). Springer International Publishing. https://doi.org/10.1007/978-3-030-00813-0_6
- Hincapié-Úsuga, A. F., Vanegas-Useche, L. V., Mesa-Montoya, C. A., Abdel-Wahab, M., Trejos Buriticá, O. I., Muñoz Guerrero, L. E., Ríos Patiño, J. I., Castillo, J. C., Tibaquirá, J. E., López, J. C., Ríos, D. A., Quirama, L. F., & Serrato, D. A. (2023). Social Appropriation of Knowledge: Research Results from the Faculties of Engineering and Applied Mechanics. Universidad Tecnológica de Pereira. <https://doi.org/10.22517/9789587229042>
- Hundial, H. (2020). The Safe Care Framework™: A practical tool for critical thinking. Nurse Education in Practice, 48, 102852. <https://doi.org/10.1016/j.nepr.2020.102852>
- Kirby, A. (2023). Exploratory Bibliometrics: Using VOSviewer as a Preliminary Research Tool. Publications, 11(1), 10. <https://doi.org/10.3390/publications11010010>
- Lazer, D. M. J., Baum, M. A., Benkler, Y., Berinsky, A. J., Greenhill, K. M., Menczer, F., Metzger, M. J., Nyhan, B., Pennycook, G., Rothschild, D., Schudson, M., Sloman, S. A., Sunstein, C. R.,

- Thorson, E. A., Watts, D. J., & Zittrain, J. L. (2018). The science of fake news. *Science*, 359(6380), 1094–1096. <https://doi.org/10.1126/science.aao2998>
- Linnenluecke, M. K., Marrone, M., & Singh, A. K. (2020). Conducting systematic literature reviews and bibliometric analyses. *Australian Journal of Management*, 45(2), 175–194. <https://doi.org/10.1177/0312896219877678>
- Liu, O. L., Frankel, L., & Roohr, K. C. (2014). Assessing Critical Thinking in Higher Education: Current State and Directions for Next-Generation Assessment. ETS Research Report Series, 2014(1), 1–23. <https://doi.org/10.1002/ets2.12009>
- McAllister, J. T., Lennertz, L., & Atencio Mojica, Z. (2022). Mapping A Discipline: A Guide to Using VOSviewer for Bibliometric and Visual Analysis. *Science & Technology Libraries*, 41(3), 319–348. <https://doi.org/10.1080/0194262X.2021.1991547>
- Mclean, M. (2015). Promising Spaces: Universities' Critical-Moral Mission and Educative Function. *Critical Studies in Teaching and Learning*, 3(2), 1–22. <https://doi.org/10.14426/cristal.v3i2.52>
- Mihailidis, P., & Thevenin, B. (2013). Media Literacy as a Core Competency for Engaged Citizenship in Participatory Democracy. *American Behavioral Scientist*, 57(11), 1611–1622. <https://doi.org/10.1177/0002764213489015>
- Modreanu, S. (2017). The Post-Truth Era? *Human and Social Studies*, 6(3), 7–9. <https://doi.org/10.1515/hssr-2017-0021>
- Nguyen, H., Ogbadu-Oladapo, L., Ali, I., Chen, H., & Chen, J. (2023). Fighting Misinformation: Where Are We and Where to Go? (pp. 371–394). https://doi.org/10.1007/978-3-031-28035-1_27
- Niño González, J. I., Barquero Cabrero, M., & García García, E. (2017). Opinión pública e infoxicación en las redes: los fundamentos de la post-verdad. *Vivat Academia. Revista de Comunicación*, 83–94. <https://doi.org/10.15178/va.2017.139.83-94>
- Parker, J. (2024). The Role of Higher Education in the Post-Truth Era. *Journal of Political Science Education*, 20(3), 391–404. <https://doi.org/10.1080/15512169.2024.2354972>
- Passas, I. (2024). Bibliometric Analysis: The Main Steps. *Encyclopedia*, 4(2), 1014–1025. <https://doi.org/10.3390/encyclopedia4020065>
- Patra, R. K., Pandey, N., & Sudarsan, D. (2022). Bibliometric analysis of fake news indexed in Web of Science and Scopus (2001-2020). *Global Knowledge, Memory and Communication*. <https://doi.org/10.1108/GKMC-11-2021-0177>
- Patrinos, H. A. (2021). The Learning Challenge in the Twenty-first Century *. In *Media, Technology and Education in a Post-Truth Society* (pp. 39–53). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-80043-906-120211004>

- Sharine, S., & Sitorus, F. K. (2024). Apakah Post-Truth Berbasis Ideologi Membahayakan Demokrasi: Perspektif Penyebaran Fakta Di Media Sosial. *JKOMDIS : Jurnal Ilmu Komunikasi Dan Media Sosial*, 4(2), 399–404. <https://doi.org/10.47233/jkomdis.v4i2.1677>
- Snellman, C. L. (2015). University in Knowledge Society: Role and Challenges. *Journal of System and Management Sciences*, 5(4), 84–113.
- Thapar, R. (2021). Some thoughts on university education. In *The Idea of a University* (pp. 7–18). Routledge India. <https://doi.org/10.4324/9781003132035-2>
- Thomas, K., & Lok, B. (2015). Teaching Critical Thinking: An Operational Framework. In *The Palgrave Handbook of Critical Thinking in Higher Education* (pp. 93–105). Palgrave Macmillan US. https://doi.org/10.1057/9781137378057_6
- Verstyn, A. (2024). THE IMPACT OF POST-TRUTH ON MODERN SPHERES OF SOCIETY. *Scientific Journal of Polonia University*, 64(3), 187–191. <https://doi.org/10.23856/6423>
- Vessuri, H., & Teichler, U. (2008). Universities as Centres of Research and Knowledge Creation: An Endangered Species? BRILL. <https://doi.org/10.1163/9789087904807>
- Vijayan, V., Thomas, T., & Nellanat, P. D. (2025). Mapping fake news and misinformation in media: A two-decade bibliometric review of emerging trends. *Insight - News Media*, 8(1), 734. <https://doi.org/10.18282/inm734>
- Yevtushenko, O., Kovalova, T., Sadivnychy, V., Zhylenko, I., & Bondarenko, O. (2022). Overcoming Post-truth Challenges: Is journalism education successful in Ukraine? *Revista Amazonia Investiga*, 11(57), 100–110. <https://doi.org/10.34069/AI/2022.57.09.11>
- Zupic, I., & Čater, T. (2015). Bibliometric Methods in Management and Organization. *Organizational Research Methods*, 18(3), 429–472. <https://doi.org/10.1177/1094428114562629>