

The Navigation The Landscape of Adult Growth: A Bibliometric Odyssey through Scopus-Indexed Publications on Adult Value Reflection (1972-2023)

Isna Annisa Rohmah*, Triono Ali Mustofa, Mutohharun Jinan, Muh Nur Rochim Maksum, Muhamad Subhi Apriantoro
Faculty of Islamic Religion, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia

Abstract

This study aims to determine adult learning and self-development mapping in Scopus-indexed publications. This research uses bibliometric analysis techniques to examine all publications indexed in the Scopus database on adult values reflection from 1972 to 2023. The data were analysed using Excel and R/R-Studio. VOSviewer was used to analyze the co-occurrence of keywords and document citations visually. The author found 507 publications matching the defined function, subject, and criteria. The results of this study show an annual growth rate of 7.8%, with the most publications on adult values reflection in 2018. The United States is the country with the highest contribution. The bibliometric analysis carried out was limited to Scopus data. Other national and international databases were not included in this study. This study presents a snapshot of the literature accessible to researchers in the fields of education and health and provides recommendations for future research. Important information about the data.

Keywords: Awareness, Curriculum, Interview, Control Study and Perceptions

Introduction

Adult values reflection is the process by which a person considers and rethinks the values they hold and that are important in their lives. Values are learned beliefs (Archer-Kuhn et al., 2020; Gallagher et al., 2018; Marsden et al., 2022; Quick, 2016) about what is important and meaningful in life that serve as guiding principles (I Putu Suardipa, I Ketut Widiara, 2013).). Our values reflect what is important to us in life. These values are often referred to as personal guiding principles or life goals (Johansson & Hamberg, 2007; Sickler et al., 2014). Individual values reflect our life experiences and the environment in which we live and serve as key contributors to our value system and the way we think and behave (Boyle et al., 2023; Huang et al., 2018; Sickler et al., 2014)). Reflection in adult learning can be defined as a process of critical thinking (Curtin et al., 2015; Lynd-Balta, 2006; Niemi, 1997) and self-evaluation (Kanthan & Senger, 2011; Niemi, 1997; Quick, 2016) of acquired experiences and knowledge. This reflection process helps adults make connections between their experiences and knowledge, leading to deeper understanding and more effective action (Dilger, 2003; Wamsler et al., 2020). Reflection can assist adults in identifying their core values (Thiel et al., 2020) and enhancing their worldview (Thiel et al., 2020) . This process of reflection is applicable in both individual and group settings and can take place in various adult education settings (Ellis, 2019; Gouthro & Holloway, 2018; McKim & Wright, 2012; Sickler et al., 2014), including training programs, courses, or work experiences. Values reflection is a crucial process in adult education that entails critical analysis (Archibald et al., 2018; Le Sommer-Péré et al., 2017), self-assessment (Daryazadeh et al., 2020; Liebenberg & Roos, 2008), and comprehension of significant values in life. It is a vital component of cognitive growth and self-awareness.

Research by Imel (Imel, 1992) on reflective practice in adult education demonstrated that this ability involves the reflection on actions to transform ambiguous practice situations into ones that provide greater certainty about which actions are most appropriate. However, the study did not explore the significance of reflection on adults. (Nässén et al., 2023) conducted a study on healthcare experiences in adults, focusing on the possibilities and constraints that arise when caring for this group. The research does not address the value of reflection for adults. Meanwhile, (Molewijk et al., 2023) The paper discusses ethical considerations in investigating employee attitudes towards coercion, team competence, user involvement, teamwork, and team issues. However, it fails to address the significance of reflective practice among adults. Research by (Asztalos Morell et al., 2023) investigated older adults' understanding of aging, focusing on care for this demographic. The study, however, did not explore the value of reflection in adults. In contrast, (Schaepekens et al., 2023) study, "Oh yes, that is also reflection," examined how a culture of reflection can address challenges but did not elaborate

* Corresponding author: o100220051@student.ums.ac.id

on the significance of reflection for adults. This study by (Lathen & Laestadius, 2021) analyzes the online focus group reflections of African American adults during COVID-19. It discusses the reflections of groups with low socioeconomic status but does not provide insight into the importance of reflection for adults themselves.

Reflection is a powerful means for individuals to identify their intrinsic values and comprehend how these values shape their perspectives and behaviors. In adulthood, reflection carries significance because it is highly valued by adults who acknowledge its role in self-growth (Henrickson et al., 2022; Niemi, 1997) and decision-making (Fichter, 2018; Kenny, 2015; Mamede et al., 2019; Matandika et al., 2022). Reflection enables adults to gain a better understanding of themselves, identify their strengths and weaknesses, and gain insight into their personal growth and development (Fischer & Pruyne, 2002). Through reflection, adults can analyze their past experiences (Obayashi et al., 2018) and learn from their mistakes and poor decisions, which can assist them in making better decisions in the future. Reflecting on what one has learned helps adults in the learning process by consolidating new knowledge (Dickinson, 2007) and connecting it with existing knowledge (Roessger, 2014). This process allows for the strengthening of knowledge retention and acquisition.

In conclusion, reflection is a valuable practice for adults as it supports personal growth, improves decision-making, enhances quality of life, promotes healthy relationships, and develops learning skills. Thus, teaching strategies that encourage reflection within adult education programs should be introduced to help enhance appreciation of reflective practice and develop reflective thinking skills. It is crucial to conduct a thorough analysis of current research discoveries to facilitate future research and establish tools for adult values contemplation. This assessment process relies heavily on the accessibility and precision of scientific research data. Bibliometric indicators are a useful tool for evaluating scientific research results, as they examine the interaction between science and technology, produce field maps, and track the development of new knowledge in a particular field. These indicators are also helpful in producing future indicators for strategic planning (Belmonte et al., 2020; Boquera et al., 2021; Zheng et al., 2019).

This study seeks to chart the progression and trends of research on adult value reflection in Scopus-indexed publications between 1972 and 2023. The selection of 1972 as the starting point was based on a Scopus search that revealed one publication on this topic that year.

Research Methods

Bibliometric analysis as an approach was used in this study (Apriantoro, 2023; Apriantoro, Herviana, et al., 2023; Apriantoro, Maheswari, et al., 2023; Apriantoro & Wijayanti, 2022). Utilizing the Scopus database between 1972 and 2023, the data was found using the Boolean search engine. On August 5, 2023, around 9: 30 am, a search was done. To analyse citations, document content, and networks, the researchers employed tools from R and RStudio, VOSviewer, and Microsoft Excel. Processing the dataset was done by the researchers in three steps.

To make sure research that may be used to bibliometric themes is accomplished, the researcher will first perform a study of the relevant literature on connected topics. Additionally, the assessment of the literature helps choose acceptable keywords that are thought to represent the range of the study.

In the second stage, the researchers searched Scopus using the Boolean operator TITLE-ABS-KEY (adults AND value AND reflection), which resulted in 3,462 documents. Further filtering was performed using the Boolean operators (LIMIT-TO (SUBJAREA, "soci") AND (LIMIT-TO (DOCTYPE, "ar"))) AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (LANGUAGE, "English")) to limit only in the social sciences subject area, articles as document types, document sources only journals, and only English articles, resulting in a final document of 503.

During the third stage, we analysed the final search documents using Scopus Analyser, R, and RStudio. Our objective was to determine the number of documents per year, documents classified by journal, author, affiliation, country, and subject/field. In addition, we analysed the document network level through the use of a VOSviewer and Microsoft Excel data processing. Details of the research procedure can be found in Figure 1.

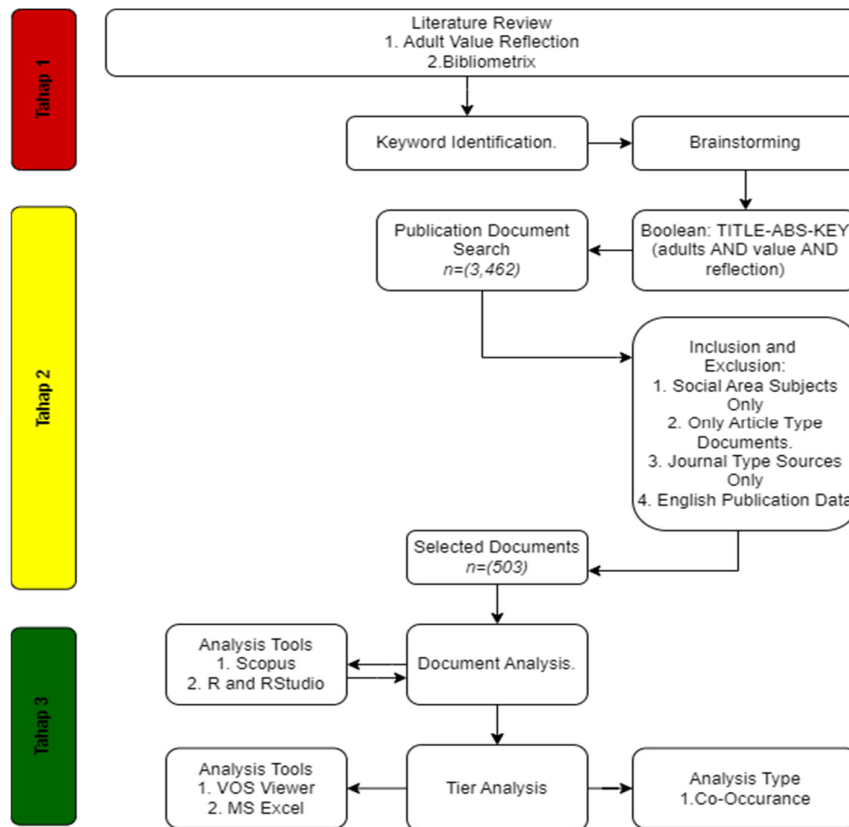


Figure 1. Flowchart of Bibliometric Adult Value Reflection

Result and Discussion

a. Document Analysis

Main Information About Data

Table 1 provides an overview of the 297 documents collected over 51 years. Includes 1727 authors, 132 single authors, 13.12% international authorship collaboration, and 19981 references with an average citation per document of 12,97 citations.

Table 1. Main Information About Data (Retrieve from Bib-Shy)

Description	Results
Main Information About Data	
Timespan	1972:2023
Sources (Journals, Books)	297
Documents	503
Annual Growth Rate %	7,8
Document Average Age	7,68
Average Citations Per Doc	12,97
References	19981
Document Contents	
Keywords Plus (Id)	1842
Author's Keywords (De)	1727
Authors	
Authors	1542
Authors Of Single-Authored Docs	132
Authors Collaboration	
Single-Authored Docs	137
Co-Authors Per Doc	3,14
International Co-Authorships %	13,12
Document Types	
Article	503

Document by Year

Based on the analysis, the development of publications on the theme of Adult Value Reflection is shown by year. As depicted in Figure 2, this document traces back to 1972, with stagnation between 1997 and 1999, and a peak of 52 publications in 2018.

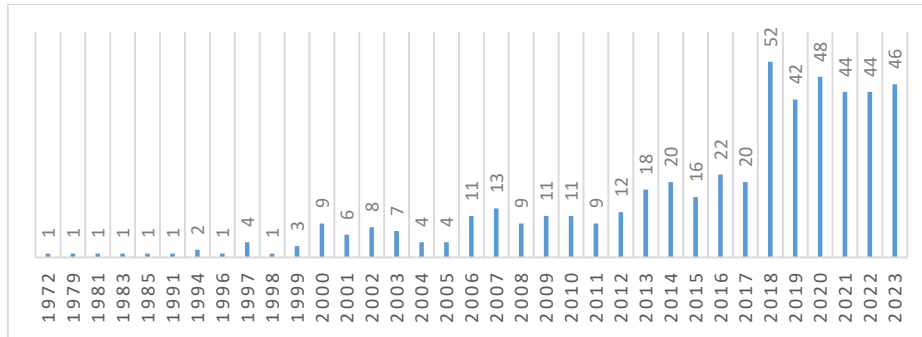


Figure 2. Adult Value Reflection Publication by Year

Most Relevant Author

Based on the R analysis presented in Figure 3, the top ten most influential authors for the publication of "Adults Value Reflection" are Pedersen, R. with four publications, followed by Mullen, J. and Rimanoczy, I. with three each. The findings demonstrate the significance of these authors' contributions to the field.

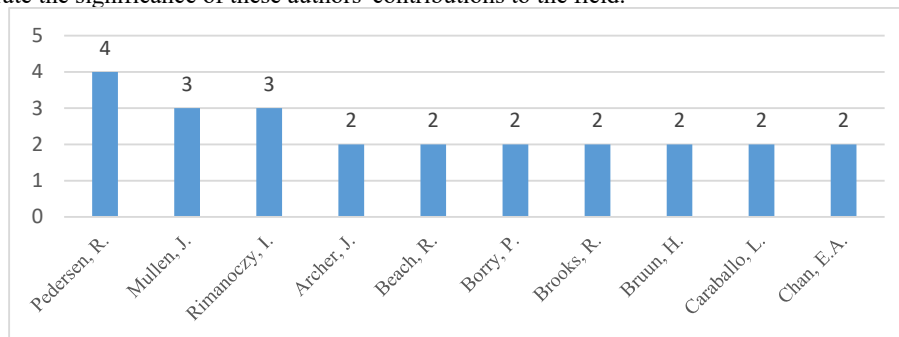


Figure 3: Most Important Authors on Reflection of Adult Values

Documents by Affiliation

Based on data analysis results, the top ten influential affiliations in publications on Adults Value Reflection are presented. The Vinje University of Amsterdam and the University of Oslo are the leading affiliations, each with seven documents, followed by the University of McGill, University of Toronto, Columbia University, and Kebenhavns University, with six documents each. Figure 4 below presents the ten affiliates that published research on Adults Value Reflection.

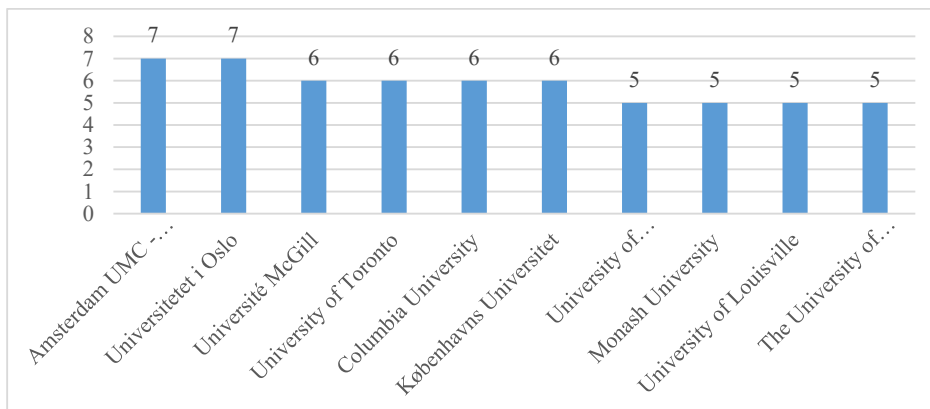


Figure 4. Affiliation of Publications on Reflection of Values in Adults

Document by Country

Figure 5 displays the Scopus-indexed publications by country on the theme of Adults Value Reflection. The United States takes the lead in this publication with 165 documents, followed by the United Kingdom with 103 documents. Six European countries dominate the publication list. Additionally, the American continent countries are ranked second, indicating that research on adult value Reflection is more popularly undertaken by European countries.

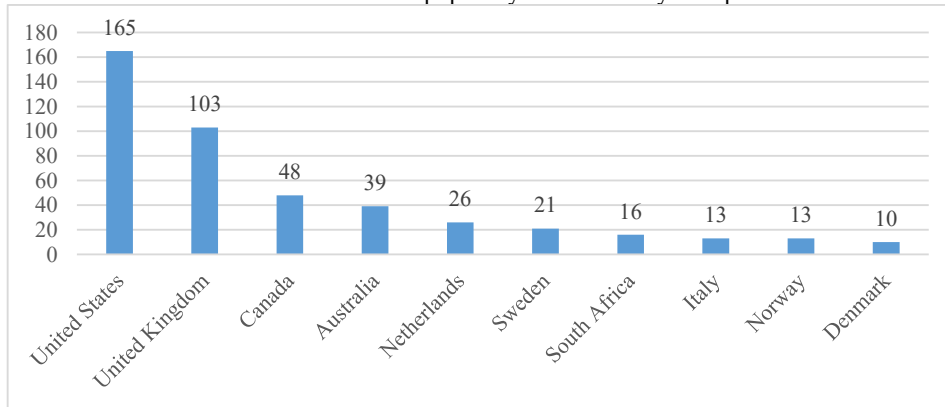


Figure 5. Countries with Publications on Adult Value Reflection

Three-Field Plot

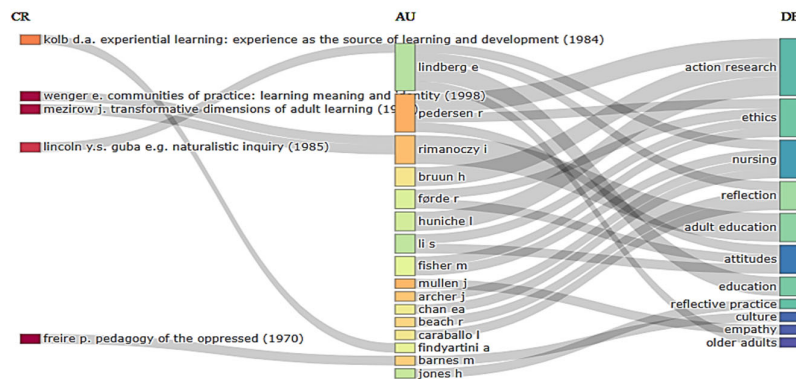


Figure 6. By Document Name, Author and Keyword

Figure 6 contains 3 observed elements; document name, author name, and keywords used. The three elements are then connected by gray plot lines that are related to each other. Based on the journal name, each journal shows which authors most frequently contribute to its publications, especially those with the theme of Adults Value Reflection.

The plot's size indicates the number of publications related to the theme. According to the figure above, there are five documents, each of which presents research on the topic of adult value Reflection.

According to the depicted chart, there are 16 authors and the size of each bar represents the respective author's research publication quantity. The top 6 authors who wrote about the Adults Value Reflection theme include Linberg, Pedersen, Rimanoczy, Fisher, Forde, and Li, respectively.

In the third section, each research topic is linked to authors who have substantial contributions to the field of ethics. The analysis reveals 11 keywords, with action research and ethics being among the top ones, indicating a strong association with ethics-related research.

Corresponding Author's Countries

Figure 7 displays that USE, the United Kingdom, and Canada have the largest SCP, while the largest MCP is held by USE with 8 documents, Sweden with 6 documents, and the United Kingdom with 4 documents. Continental Europe dominates the documents.

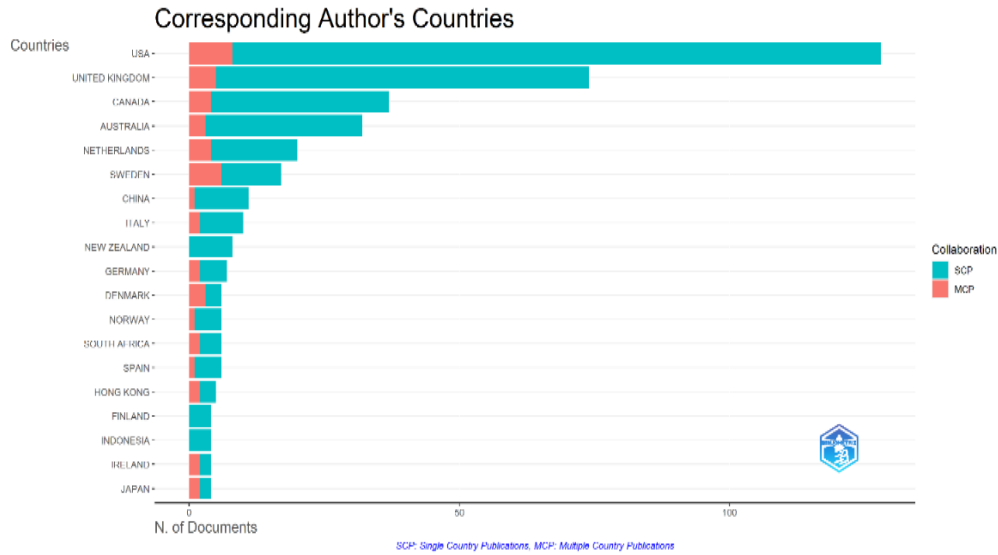


Figure 7. By Corresponding Author's Countries

Most Global Cited Document

Citation analysis with Vosviewer as in Table 2. Shows that KASSIRER JP, 2010, ACAD MED is the document with the highest total citations with 251 citations and is the document with the highest TC per year. So the TC affects the TC per year, but the year of publication does not affect the TC.

Table 2. Documents with the Most Cited Publications

Paper	Total Citations	TC Per Year	Normalized TC
Kassirer Jp, 2010, Acad Med	251	17,93	7,04
Klein Bek, 2005, Arch Gerontol Geriatr	210	11,05	3,47
Niemi Pm, 1997, Med Educ	137	5,07	1,99
Brown Km, 2006, Educ Adm Q	132	7,33	4,26
Seale C, 1997, Soc Sci Med	130	4,81	1,89
Paquette M-C, 2004, Soc Sci Med	122	6,10	1,69
Xue Sa, 2003, J Speech Lang Hear Res	109	5,19	2,62
Shapland J, 2011, Punishment Soc	105	8,08	2,48
Bindal T, 2011, Med Teach	97	7,46	2,29
Dilger H, 2003, Med Anthr Cross Cult Stud Health Illn	97	4,62	2,33

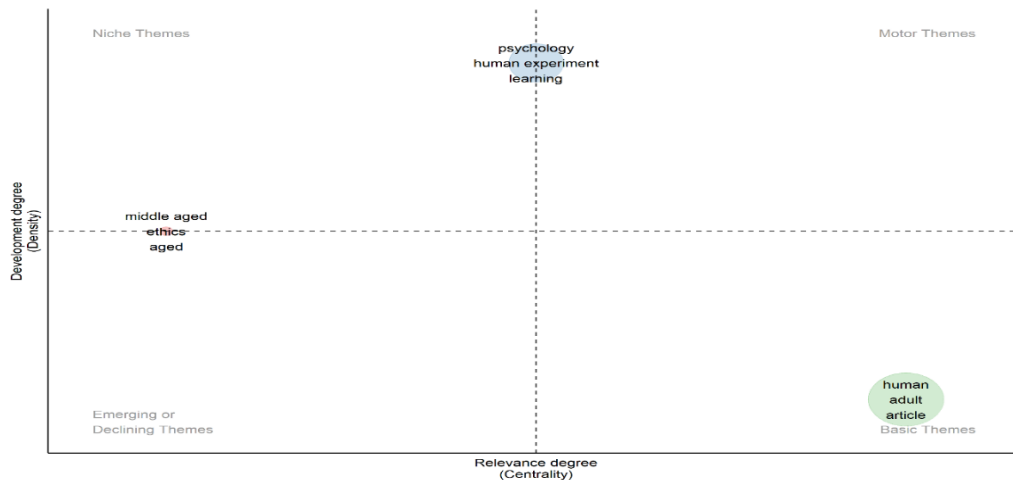


Figure 8. Theme Mapping with VOSviewer

- Apriantoro, M. S., Maheshwari, S. G., Muthoifin, M., & Rosyadhi, R. I. (2023). The Potential of Islamic Mutual Funds: Research Stream and Future Direction. *Iranian Economic Review*.
- Apriantoro, M. S., & Wijayanti, N. R. (2022). Bibliometric Analysis of Research Directions In Islamic Bank In The Pandemic Period. *NISBAH: Jurnal Perbanka Syariah*, 8(2), 127–137.
- Archer-Kuhn, B., Ayala, J., Hewson, J., & Letkemann, L. (2020). Canadian reflections on the Covid-19 pandemic in social work education: from tsunami to innovation. *Social Work Education*, 39(8), 1010–1018. <https://doi.org/10.1080/02615479.2020.1826922>
- Archibald, T., Neubauer, L. C., & Brookfield, S. D. (2018). The Critically Reflective Evaluator: Adult Education's Contributions to Evaluation for Social Justice. *New Directions for Evaluation*, 2018(158), 109–123. <https://doi.org/10.1002/ev.20319>
- Asztalos Morell, I., De, S., Johansson, C., & Gustafsson, L. K. (2023). Middle-class older adults living alone in urban India: Older adults' understandings of aging alone. *Journal of Religion, Spirituality, and Aging*, 00(00), 1–26. <https://doi.org/10.1080/15528030.2022.2164395>
- Belmonte, J. L., Segura-Robles, A., Moreno-Guerrero, A.-J., & Parra-González, M. E. (2020). Machine learning and big data in the impact literature. A bibliometric review with scientific mapping in a web of science. *Symmetry*, 12(4). <https://doi.org/10.3390/SYM12040495>
- Boquera, L., Castro, J. R., Pisello, A. L., & Cabeza, L. F. (2021). Research progress and trends on the use of concrete as thermal energy storage material through bibliometric analysis. *Journal of Energy Storage*, 38. <https://doi.org/10.1016/j.est.2021.102562>
- Boyle, A., Abdulla, S., Odrowąż-Coates, A., Tah, J., Kiss, J., Grung, R. M., Ahlström, M., & Marsh, L. (2023). Supporting the social inclusion of children and young adults with IDD and psychiatric comorbidities: Auto-biographical narratives of practitioners and academics from Europe. *Society Register*, 7(2), 33–48. <https://doi.org/10.14746/sr.2023.7.2.03>
- Curtin, A. J., Martins, D. C., Schwartz-Barcott, D., DiMaria, L. A., & Soler Ogando, B. M. (2015). Exploring the use of critical reflective inquiry with nursing students participating in an international service-learning experience. *Journal of Nursing Education*, 54(9), S95–S98. <https://doi.org/10.3928/01484834-20150814-17>
- Daryazadeh, S., Adibi, P., Yamani, N., & Mollabashi, R. (2020). Impact of a narrative medicine program on reflective capacity and empathy of medical students in Iran. *Journal of Educational Evaluation for Health Professions*, 17. <https://doi.org/10.3352/JEEHP.2020.17.3>
- Dickinson, T. D. (2007). (Hetero) Sexism as a weapon of the world system: Feminist reflections on household research by Joan Smith and the Fernand Braudel Center. *Review*, 30(4), 261–281.
- Dilger, H. (2003). Sexuality, AIDS, and the Lures of Modernity: Reflexivity and Morality among Young People in Rural Tanzania. *Medical Anthropology: Cross-Cultural Studies in Health and Illness*, 22(1), 23–52. <https://doi.org/10.1080/01459740306768>
- Ellis, R. D. (2019). The role of values in scientific theory selection and why it matters to medical education. *Bioethics*, 33(9), 984–991. <https://doi.org/10.1111/bioe.12612>
- Fichter, R. (2018). Do the Right Thing! Developing Ethical Behavior in Financial Institutions. *Journal of Business Ethics*, 151(1), 69–84. <https://doi.org/10.1007/s10551-016-3275-7>
- Fischer, K., & Pruyne, E. (2002). *Reflective Thinking in Adulthood*. https://doi.org/10.1007/978-1-4615-0617-1_10
- Gallagher, S., Little, M., & Hooker, C. (2018). The values and ethical commitments of doctors engaging in macroallocation: A qualitative and evaluative analysis. *BMC Medical Ethics*, 19(1). <https://doi.org/10.1186/s12910-018-0314-1>
- Gouthro, P. A., & Holloway, S. M. (2018). Learning to be critically reflective: exploring fiction writing and adult learning. *Studies in Continuing Education*, 40(2), 133–148. <https://doi.org/10.1080/0158037X.2017.1415875>
- Henrickson, L., Jephcote, W., & Comissiong, R. (2022). Soft skills, stories, and self-reflection: Applied digital storytelling for self-branding. *Convergence*, 28(6), 1577–1597. <https://doi.org/10.1177/13548565221091517>
- Huang, Y., Sun, D. J., & Zhang, L.-H. (2018). Effects of congestion on drivers' speed choice: Assessing the mediating role of state aggressiveness based on taxi floating car data. *Accident Analysis and Prevention*, 117, 318–327. <https://doi.org/10.1016/j.aap.2018.04.030>
- I Putu Suardipa, I Ketut Widiara, D. N. M. I. (2013). Values and adult age: Findings from two cohorts of the European Social Survey. *European Journal of Ageing*, 10(1), 11–23. <https://doi.org/10.1007/s10433-012-0247-3>
- Imel, S. (1992). Reflective practice in adult education (ERIC digest). *ERIC Clearinghouse on Adult Career and Vocational Education*, 122, 1–7.
- Johansson, E. E., & Hamberg, K. (2007). From calling to a scheduled vocation: Swedish male and female students' reflections on being a doctor. *Medical Teacher*, 29(1), e1–e8. <https://doi.org/10.1080/01421590601044992>
- Kanthan, R., & Senger, J.-L. B. (2011). An appraisal of students' awareness of "self-reflection" in a first-year pathology course of undergraduate medical/dental education. *BMC Medical Education*, 11(1). <https://doi.org/10.1186/1472-6920-11-67>
- Kenny, B. (2015). Food Culture, Preferences and Ethics in Dysphagia Management. *Bioethics*, 29(9), 646–652. <https://doi.org/10.1111/bioe.12189>
- Lathen, L., & Laestadius, L. (2021). Reflections on Online Focus Group Research With Low Socio-Economic Status

- African American Adults During COVID-19. *International Journal of Qualitative Methods*, 20. <https://doi.org/10.1177/16094069211021713>
- Le Sommer-Péré, M., Gagnon, J. A., & Stiegler, B. (2017). Multidisciplinary and intercultural reflection on the ethics of the care. Experience of France-Quebec exchanges (2009–2015). *Ethique et Sante*, 14(3), 138–144. <https://doi.org/10.1016/j.etiqe.2017.07.008>
- Liebenberg, J., & Roos, V. (2008). Preadolescent leaders: Critical reflections from a well-being perspective. *South African Journal of Education*, 28(4), 581–593. <https://doi.org/10.15700/saje.v28n4a206>
- Lynd-Balta, E. (2006). Using literature and innovative assessments to ignite interest and cultivate critical thinking skills in an undergraduate neuroscience course. *CBE Life Sciences Education*, 5(2), 167–174. <https://doi.org/10.1187/cbe.05-08-0108>
- Mamede, S., Figueiredo-Soares, T., Elói Santos, S. M., de Faria, R. M. D., Schmidt, H. G., & van Gog, T. (2019). Fostering novice students' diagnostic ability: the value of guiding deliberate reflection. *Medical Education*, 53(6), 628–637. <https://doi.org/10.1111/medu.13829>
- Marsden, J. E., Deboo, S. P., Cripps, M., Longridge, N. N., Aspden, M., & Fox, K. (2022). Improving dental student confidence through the use of simulated patient cases. *European Journal of Dental Education*. <https://doi.org/10.1111/eje.12867>
- Matandika, L., Millar, K., Umar, E., Joy, E., & Mfutso-Bengo, J. (2022). Operationalizing a real-time research ethics approach: supporting ethical mindfulness in agriculture-nutrition-health research in Malawi. *BMC Medical Ethics*, 23(1). <https://doi.org/10.1186/s12910-021-00740-1>
- McKim, A., & Wright, N. (2012). Reflections on a collaborative adult literacy and numeracy action inquiry. *Educational Action Research*, 20(3), 353–366. <https://doi.org/10.1080/09650792.2012.697393>
- Molewijk, B., Pedersen, R., Kok, A., Førde, R., & Aasland, O. (2023). Two years of ethics reflection groups about coercion in psychiatry. Measuring variation within employees' normative attitudes, user involvement, and the handling of disagreement. *BMC Medical Ethics*, 24(1). <https://doi.org/10.1186/s12910-023-00909-w>
- Nässén, K., Gillsjö, C., & Berglund, M. (2023). Health care professionals' experiences of possibilities and constraints in caring for older adults living with long-term pain in community home care. *Journal of Aging Studies*, 65. <https://doi.org/10.1016/j.jaging.2023.101134>
- Niemi, P. M. (1997). Medical students' professional identity: Self-reflection during the preclinical years. *Medical Education*, 31(6), 408–415. <https://doi.org/10.1046/j.1365-2923.1997.00697.x>
- Obayashi, T., Oto, T., Nagatani, Y., Taguchi, N., Kawaguchi, H., & Ogawa, T. (2018). Dental trainees reflect more critically on negative experiences: portfolio analysis using a pragmatic approach and a rubric in Japan. *BMC Medical Education*, 18(1). <https://doi.org/10.1186/s12909-018-1405-x>
- Quick, K. K. (2016). The role of self-and peer assessment in dental students' reflective practice using standardized patient encounters. *Journal of Dental Education*, 80(8), 924–929.
- Roessger, K. (2014). The Effect of Reflective Activities on Instrumental Learning in Adult Work-Related Education: A Critical Review of the Empirical Research. *Educational Research Review*, 13. <https://doi.org/10.1016/j.edurev.2014.06.002>
- Schaepkens, S. P. C., de la Croix, A., & Veen, M. (2023). 'Oh yes, that is also reflection'—Using discursive psychology to describe how GP registrars construct reflection. *Medical Education*, December 2022, 1–9. <https://doi.org/10.1111/medu.15183>
- Sickler, J., Cherry, T. M., Allee, L., Smyth, R. R., & Losey, J. (2014). Scientific Value and Educational Goals: Balancing Priorities and Increasing Adult Engagement in a Citizen Science Project. *Applied Environmental Education and Communication*, 13(2), 109–119. <https://doi.org/10.1080/1533015X.2014.947051>
- Thiel, M. M., Luff, D., Kerr, E. E., Robinson, M. R., & Meyer, E. C. (2020). Health Care Professionals' Reflections on Their Learning as Spiritual Generalists and Integration Into Practice. *Journal of Continuing Education in the Health Professions*, 40(4), 228–234. <https://doi.org/10.1097/CEH.0000000000000318>
- Wamsler, C., Schöpke, N., Fraude, C., Stasiak, D., Bruhn, T., Lawrence, M., Schroeder, H., & Mundaca, L. (2020). Enabling new mindsets and transformative skills for negotiating and activating climate action: Lessons from UNFCCC conferences of the parties. *Environmental Science and Policy*, 112, 227–235. <https://doi.org/10.1016/j.envsci.2020.06.005>
- Zheng, L., Chen, K., & Lu, W. (2019). Bibliometric Analysis of Construction Education Research from 1982 to 2017. *Journal of Professional Issues in Engineering Education and Practice*, 145(3). [https://doi.org/10.1061/\(ASCE\)EI.1943-5541.0000412](https://doi.org/10.1061/(ASCE)EI.1943-5541.0000412)