REVITALIZING LIBRARIES IN THE GOOGLE GENERATION

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Revitalizing Libraries in the Google Generation

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Contents

Mapping of Research Productivity on Heutagogy In Education: A Scopus Databas from 2007-2022 – A Scientometric Analysis

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Abstract

In the row of Pedagogy, Andragogy and Heutagogy are the teaching and learning methods in the field of teacher education. After 2000 the Heutagogy in education slowly developed outside India. This study has 355 articles published in 275 sources and finds out 2021 has more papers published, got 3.27 percent average citation per article from 2007 to 2022, Na Na is the most prolific author to published papers in Heutagogy. This study also found that the International Journal of Emerging Technologies in Learning journal is the top journal of publications in heutagogy, Australas. Soc. Comput. Learn. Tert. Education (2007) got more citations (366) of the article, Auckland University of Technology has published more articles (23) in Heutagogy, Australia is the leading country to get more citations (830) of the articles.

Keywords: *Heutagogy, Education, Scientometrics, Scopus Database*

Introduction

Pedagogy is one of the leading teaching technology in education and it has academic subject cum in theoretical aspects. Andragogy is the one learning method specific for adult learners and it focuses on self-directed learning with own's experience and other experience in learning. Heutagogy (pronounced hyoo-tuh-goh-jee) is a term derived from the Greek word "heuriskein". According to Graham R. Parslow, "Heureskein is the Greek verb to discover and underlies the etymology of the word "heuristic" that is defined as a method of teaching by allowing students to discover for themselves. Heutagogy was first defined by Stewart Hase and Chris Kenyon (2000), both from Australia, as the study of self-determined learning. The theory applies a holistic, humanistic approach to developing learner capacity and capability and makes learners "the major agent in their own learning, which occurs, as a result of personal experience" (Hase & Kenyon, 2007, p. 112). In self-determined learning, learners not only define what they will learn, but how they will learn it – and are given full agency of their learning environment, content, and process. Heutagogy was developed in the 21st century from outside India. Last 20 years scientometrics studies have become familiar in the library and information science subjects in India.). This study obtained visualization on research networks offers valuable insights and an in-depth understanding of the key researchers, institutions, fundamental articles, and salient topics through mapping analysis. animated maps. We also identify that this scientometric review offers useful reference points for budding researchers and provides valuable in-depth knowledge to experienced researchers and practitioners in the field of a particular area of this study.

Review of Related Literature: Sugeng Rifqi Mubaroq, Ade Gafar Abdullah, Agus Setiawan (2020) found that this article tries to link with vocational education as an institution that prepares the

workforce, especially in the era of industry 4.0, as part of sustainability. This article consolidates intellectual production and the evolution of the field of smart working and sustainability research with a socio-technical approach, using the analysis of scientometrics technology. The results are discussed from the perspective of the author using the relevance of the journal, the keywords, and the relevance of the article and its citations. We provide a comprehensive view and review of smart working and sustainability studies using a socio-technical approach. At the end of the article, there is a discussion about the implications and limitations of research.

Leonard Heilig, Stefan Vob (2014) explored this study that , the popularity and rapid development of cloud computing in recent years has led to a huge amount of publications containing the achieved knowledge of this area of research. this study applies scientometric means to empirically study the evolution and state of cloud computing research with a view from above the clouds. The results of this study provide a better understanding of patterns, trends and other important factors as a basis for directing research activities, sharing knowledge and collaborating in the area of cloud computing research. Sheng Jiang , Junwei Ma, Zhiyang Liu and Haixiang Guo (2022) Geohazard prevention and mitigation are highly complex and remain challenges for researchers and practitioners. Artificial intelligence (AI) has become an effective tool for addressing these challenges. Therefore, for decades, an increasing number of researchers have begun to conduct AI research in the field of geohazards leading to rapid growth in the number of related papers. 9226 scientometric records from the Web of Science core collection database. Multiple types of scientometric techniques, including coauthor analysis, co-citation analysis, and cluster analysis were employed to identify the most productive researchers, institutions, and hot research topics. The results show that research related to the application of AI in the field of geohazards experienced a period of rapid growth after 2000, with major developments in the field occurring in China, the United States, and Italy. This scientometric analysis and visualization are promising for reflecting the global picture of AI-based geohazard research comprehensively and possess potential for the visualization of the emerging trends in other research fields.

Objectives of the Study: The main objectives framed for the present study are:

- To identify the annual production of publications.
- To find out the most prolific authors with high impact in the research output on Heutagogy.
- To find out the source cum journal ranking through Bradford law output on Heutagogy.
- To find out the top most affiliation of the sources research output on Heutagogy in Education.
- To identify the most cited papers in the research output on Heutagogy in Education.
- To identify the most contributing affiliations in the research output on Heutagogy in Education.
- To find out the country wise citations in the research output on Heutagogy in Education.

Limitations of the Study

- The study covers the research productivity in the area of Heutagogy in Education from 2007-2022.
- The study covers the research productivity in the area of Heutagogy in Education from sources in the Scopus database.

Research Methodology of the Study: There are various sources contributing to the research productivity in the field of Heutagogy in the sources. The necessary date was collected from Scopus

database from 2007 to 2022. A total of 355 documents were downloaded and analyzed by using the Bib-Excel as per the objectives of the study.

Major Findings of the Study

Table 1: Annual Production of the Publications from 2007-2022

Sl. No	Year	Articles	Sl. No	Year	Articles
1	2007	1	9	2015	7
2	2008	1	10	2016	24
3	2009	2	11	2017	20
4	2010	4	12	2018	24
	2011	4	13	2019	44
6	2012	2	14	2020	65
7	2013	9	15	2021	78
8	2014	5	16	2022	65

Table 1 discovers the sources in the mentioned period from 2007 to 2022. Overall 78 articles published in 2021, and followed by 65 in 2020, 2022, and 44 in 2019.

Table 2: Top 10 Authors with High Impact

Element	H_Index	G_Index	M_Index	TC	NP	PY_Start
Na Na	8	19	0.571	508	19	2010
Cochrane T	7	13	0.538	172	14	2011
Narayan V	5	10	0.385	124	10	2011
Lavrov E	4	5	0.571	68	5	2017
Aguayo C	3	4	0.429	90	4	2017
Aiello S	3	3	0.429	40	3	2017
Ana A	3	4	0.75	30	4	2020
Blaschke LM	3	3	0.429	62	3	2017
Conaghan P	3	3	1	136	3	2021
Jones C	3	5	0.3	128	5	2014

Table 2 reveals that, Na Na got 8 h-index and followed by Cochranet got 7, Narayan V got 5, Lavrov E got 4, and all the other authors are got 3 h-index respectively.

Table 3: Bradford Law

SO	Rank	Freq	Cumfreq	Zone
International Journal of Emerging Technologies in Learning	1	6	6	Zone 1
Journal of physics: Conference Series	2	6	12	Zone 1
ACM International Conference Proceeding Series	3	5	17	Zone 1
Australasian Journal of Educational Technology	4	5	22	Zone 1
Communications in Computer and Information Science	5	5	27	Zone 1
Frontiers in Education	6	4	31	Zone 1
International Journal of Evaluation and Research in Education	7	4	35	Zone 1
International Review of Research in Open and Distance Learning	8	4	39	Zone 1
Journal of Engineering Science and Technology	9	4	43	Zone 1
British Journal of Educational Technology	10	3	46	Zone 1
Computers and Education	11	3	49	Zone 1

Table 3shows that, application Bradford law of International Journal of Emerging Technologies in Learning is the most prolific source and followed by Journal of Physics: Conference Series in second, ACM International Conference Proceeding Series in third, Australasian Journal of Educational

Technology in fourth, Communications in Computer and Information Science in fifth and other journals in the respective places.

Table 4: Most Citations of the Documents

Paper	DOI	Total Citations	TC per Year	Normalized TC
Mcloughlin C, 2007, Ascilite 2007 - Australas. Soc. Comput. Learn. Tert. Educ.	NA	366	21.53	1.00
Na Na, 2013, Educ. Psychol.	10.1080/00461520.2013.804395	345	31.36	4.80
Neck HM, 2018, Entrep. Educ. Pedagog.	10.1177/2515127417737286	254	42.33	16.89
Owston R, 2013, Internet High. Educ.	10.1016/j.iheduc.2012.12.003	242	22.00	3.37
Huang B, 2019, Interact. Learn. Environ.	10.1080/10494820.2018.1495653	153	30.60	11.09
Greif R, 2021, Resuscitation	10.1016/j.resuscitation.2021.02.016	119	39.67	16.28
Hew KF, 2019, Br. J. Educ. Technol.	10.1111/bjet.12770	89	17.80	6.45
Brown TH, 2015, Int. Rev. Res. Open Distance Learn.	10.19173/irrodl.v16i2.2071	75	8.33	4.91
Hosen M, 2021, Comput. Educ.	10.1016/j.compedu.2021.104262	69	23.00	9.44
Christensen R, 2017, Comput. Hum. Behav.	10.1016/j.chb.2017.07.014	69	9.86	3.54
Jones C, 2014, Educ. Train.	10.1108/ET-06-2014-0065	69	6.90	4.66

Overall 355 documents, Mcloughlin C, (2007) article got 366 citations, followed by Na Na (2013) got 345, Neck HM (2018) got 254, Owston R (2013) got 242, Huang B, (2019) got 153, Greif R, (2021) got 119, Hew KF, (2019) got 89, Brown TH, (2015) got 75, and Hosen M, (2021), Christensen R, (2017), and Jones C, 2014, got 69 each respectively.

Table 5: Most Affiliations of the Documents

Affiliation	Articles
Auckland University of Technology	23
Universitas Negeri Malang	13
Universitas Pendidikan Indonesia	13
Australian Catholic University	7
Queensland University of Technology	7
Sultan Idris Education University	6
University of Houston-Clear Lake	6
University of Wales Trinity Saint David	6
University of Wollongong	6
Bina Nusantara university	5

Table 5 reveals that out of 355 articles were published in the year 2007 to 2022 under various affiliated Institutions contributions.

This table finds out top ten affiliations with their articles Contributions Auckland University of Technology contributed 23 articles and followed by Universitas Negeri Malang, Universitas Pendidikan Indonesia had 13, Australian Catholic University and Queensland University of Technology had 7, Sultan Idris Education University, University of Houston-Clear Lake, University of

Wales Trinity Saint David, University of Wollongong had 6, Bina Nusantara University had 5 articles each respectively.

Table 6: Country-wise Most Cited Documents Affiliations of the Documents

Country	TC	Average Article Citations
Australia	830	20.20
USA	460	10.50
Canada	359	35.90
Netherlands	345	345.00
Hong Kong	260	52.00
New Zealand	238	9.90
United Kingdom	211	9.20
Indonesia	172	4.90
South Africa	121	12.10
Malaysia	96	5.10

Out of 355 documents published, Austalia got 830 citations, and followed by USA got 460, Canada got 359, Netherlands got 345, Hong Kong got 260, New Zealand got 238, United Kingdom got 211, Indonesia got 172, South Africa got 121, Malaysia got 96 respectively.

Conclusion

Heutagogy in education is a 21st-century learning method in education and slowly started from outside India. It is one of the advanced learning methods in the current scenario and adopted in a few countries. The analysis of the research productivity in Heutagogy revealed a slow increase the publications from 2007 to 2022. Teacher educators are more concentrated on this learning method for contributing the articles and also adopting the technology in our country.

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