

The Advancement of Research on Human Resources Development in the Public Area: A Bibliometric Analysis

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Abstract. Understanding how "Human Resource Development" puts the right person in the right place at the right time, make research on this theme always interesting. This study aims to examine how the term has been used in research, particularly in the public sector. We discovered 579 articles on the subject by focusing on publications that are indexed in the Scopus database and applying bibliometric analysis. Using the VOSViewer programme, we assess the research topic and determine the most popular topic, the most cited author(s), the most important publication, and the most productive nation or regions. Consequently, there were variations in the research from 1968 to 2023; the highest number of documents (48) was recorded in 2019. With 244 citations, Wright, B. E.; Davis, B. S. (2003) is the most cited authors. In terms of productivity, the United States leads the world, followed by Indonesia at position eight.

Keywords: Human Resources Development, Public Area, Bibliometric Analysis

1 Introduction

HR departments are top priorities in organisations, and effective HR force management is the only way to ensure their survival and growth. A well-thought-out public human resource development (HRD) programme is essential to accomplishing the goals and missions of public agencies and must be in place. HR practises describe how managers and lower-level employees engage with and are affected by an organization's HR programmes. As a result, HR procedures account for the possibility of variance in workers' opinions and experiences with an HR programme depending on how well the programme is implemented [1].

For many years, the development of human resources in Indonesia's public sector also has been a major concern. Nonetheless, there are always going to be difficulties, particularly for HR managers who haven't yet emphasised that every civil servant has the absolute right to competency development. On the other hand, since the effectiveness of public service delivery depends on having a workforce that is properly trained and deployed [2], Human Resource Management (HRM) systems, such as the knowledge incentive system that emphasises staff development, have been adopted by today's reformers [3]. Assessing each employee to determine their potential and competencies is a crucial step in developing human resources (HR), and career development within HR is closely linked to the transparent, competitive, and objective promotion process for open positions [4].

The numerous issues pertaining to personnel management highlight the urgent need for human resources management reform and revitalisation. Low morale and motivation, decreased output and efficiency, inadequate measurements, extensive centralisation, a lack of clear policies and mission statements, structural rigidities, poor communications, and hesitant leadership are all signs of the issues. These are a few of the symptoms that presently cast the personnel function in shadows. More importantly, not enough attention is being paid to the harmonisation and integration of efforts to maximise the efficiency of human resource management systems. The relationship between management capability and national development is impacted by public sector human resource development. Thus, the foundation of any human resource development process must be well-thought-out action plans [5].

2 Human Resource Development (HRD): an Overview

HRD is the process of creating and/or unleashing human expertise through personnel training and development, organisation development, and other means in order to enhance performance [6]. The procedures of HRD could optimise human expertise in the goal of achieving win-win outcomes for both the organisation and the individual.

HRD that prioritises individual development can help clarify goals and missions, particularly if these activities help people improve their knowledge, skills, and abilities (KSA) at work [7]. In this sense, HRD is viewed as a socialisation process for employees that emphasises KSA development to promote comprehension of work-related duties. HRD initiatives also need to be flexible enough to adapt to changes in the workplace and aligned with corporate objectives and strategies. According to Clarke, employees can obtain personal growth through training programs, and highly esteemed HRD is a 'vehicle for their own personal development [8].

HRD interventions should be planned and carried out utilising the four-phase method of need assessment, design, implementation, and evaluation, which is based on an HRD process model. To be more precise, the phases of design and implementation decide on the training strategies and carry out the programme or intervention, respectively. HRD programme delivery calls for a great deal of planning, ingenuity, and adaptability. As a result, training programmes help every trainee advance to a proficient performance level [8].

HRD includes the organization's development-focused initiatives. An individual must be able to grow in an environment that supports his development in order to perform well. Numerous studies have been carried out to identify and examine the variables influencing the HRD that is prevalent in businesses [9].

3 Methodology

Bibliometric analysis was used as a method in this article. Bibliometrics presents "a powerful set of methods and measures for studying the structure and process of scholarly communication" [10]. We believed that bibliometric research advances methods for the methodical study of academic publication patterns and knowledge dissemination while also providing an empirically grounded understanding of academic fields. This study highlights the significance of bibliometric analysis as a quantitative instrument for shedding light on the development of the respective fields of study.

In this study we extracted the article using the Scopus repository in November 2023, combining the terms “Human Resource Development” AND "Public" and were filtered by the topic: Article title, Abstract, Keywords. This search yielded 785 articles in the range 1968 to 2023, consist of 579 articles, 80 conference paper, 55 review, 41 book chapter, 14 book, 6 short survey, 4 note, 3 conference review, 1 editorial and 1 retracted document. We use the “articles” only in our discussion (n=579). Then, we conducted several analysis by VOSviewer software. We conducted the analysis to answer the following questions:

- a. Which subjects that are studied the most
- b. Who are the most cited authors
- c. Which one is the most significant publication
- d. Which countries/regions is the most article come from

4 Results & Discussion

4.1 The Subjects That are Studied the Most

This section presents the findings from our examination of research topics related to human resource development from 1968 to 2023. As seen in figure 1, we can observe the fluctuations, where the highest number of documents (48) was recorded in 2019.

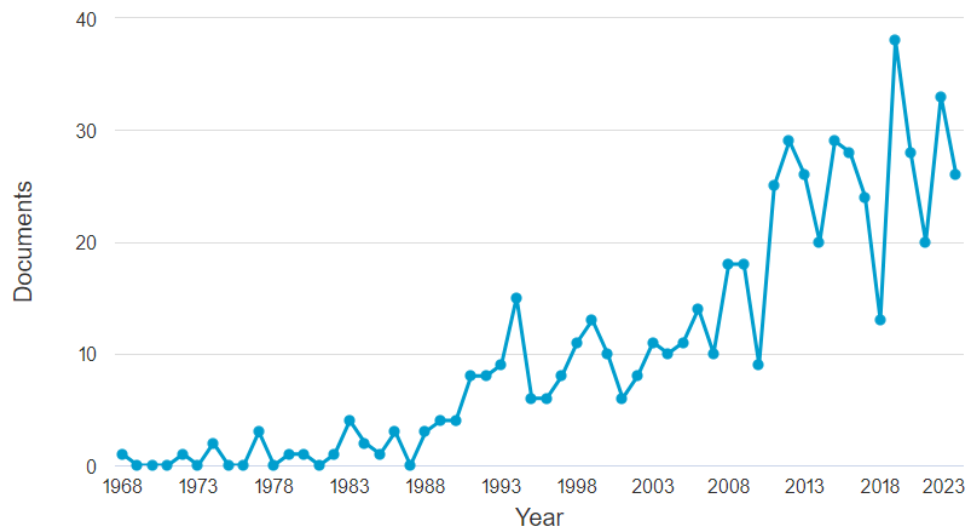


Fig. 1. Number of Publication Across Time

Human resource development is the most often discussed topic, according to a co-occurrence analysis performed using the VOSviewer software. This is evident from both views of the All Keyword (Figure 2) and Author Keyword (Figure 3). The strength of the relationship between the keywords is measured by the total link strength. For the first case, we analyzed co-occurrence from all keywords. Out of the 579 articles selected, we obtained 2.916 keywords, with a minimum of 5 occurrences, 226 keywords meet the thresholds, as we can see in Figure 2.

The identical results are obtained from both tests, with human resource development itself being the most often used keyword. Figure 2 establishes a correlation between several all keywords that can be categorised into four clusters, as shown in the Table 1, and Figure 3 establishes a correlation between several author keywords that can be categorised into six clusters, as shown in the Table 2.

Table 1. Topics Cluster in Human Resource Development Research from All Keywords

Cluster	Total Item	Items
1	88	Adult, Capacity Building, China, Community Development, Controlled Study, Covid-19, Cross-Sectional Study, Decentralization, Developing World, Development, Disasters, Economic & Social Effects, Economic Growth, Education, Employment, Epidemiology, Evaluation, Female, Ghana, Government, Health Education, Higher Education, HRD, Human, Human Capital, Human Experiment, Human Resource, Human Resource Development, Human Resource Management, Human Resources, Human Resources Development, Humans, India, Indonesia, Information Technology, Innovation, Interview, Investment, Investments, Iran, Japan, Job Performance, Job Satisfaction, Knowledge Management, Leadership, Learning, Local Government, Malaysia, Male, Management, Manager, Mental Health, Mentoring, Middle Aged, Motivation, Needs Assessment, Nurse, Nursing, Nutrition, Organizational Culture, Pakistan, Perception, Performance, Personnel, Personel Training, Physician, Private Sector, Public Hospital, Public Sector, Public-Private Partnership, Qualitative Research, Questionnaire, Resources Development, Saudi Arabia, Skill, Societies and Institutions, South Africa, Strategic Planning, Surveys and Questionnaire, Technology, Technology Transfer, Thailand, Total Quality Management, Training, Training and Development, Training Evaluation, Water Supplay, Workforce.
2	68	Africa, Aged, Australia, Bangladesh, Communication, Community Care, Community Health Service, Comparative Study, Curriculum, Delivery of Health Care, Economic Aspect, Eductional, Medical, Financial Management, Financing, Government, Health Care, Health Acces, Health Cost, Health Delivery, Health Care Facility, Health Care Organization, Health Care Personel, Health Care Planning, Health Care Policy, Health Care Quality, Health Care Reform, Health Care System, Health Center, Health Personel, Health Policy, Health Program, Health Promotion, Health Service, Health Services, Health Service Accesibility, Health Service Research, Hospital, Human Immudeficiency, Interpersonal Communication, Manpower, Medical Education, Medical Research, Methodology, Mortality, National Health Program, Organization Management, Personel Management, Policy Making, Politics, Poverty, Practice Guideline, Prevalence, Primary Health Care, Priority Journal, Procedures, Proram Development, Program Evaluation, Public Health, Public Health Service, Public Relations, Quality Control, Quality of Life, Resources Management, Review, Rural Health Care, Staff Development, Teaching, United States, World Health Organization.

3	68	Age, Age Factors, Asia, Asia, Southeastern, Birth Rate, Conference and Congress, Congresses, Conservation and Natural Resources, Demographic Factors, Demography, Developing Countries, Developing Country, Development Planning, Economic Planning, Economic Development, Economic Factor, Economics, Emigration and Immigration, Environment, Environmental Protection, Evaluation Studies, Family Planning, Fertility, Financial Activities, Health, Health Care Manpower, Health Manpower, Health Planning, Health Planning Guideline, Human Rights, International Agencies, International Cooperation, Macroeconomic Factors, Migration, Natural Resources, Organization, Organization and Administration, Organizations, Pacific Islands, Philippines, Planning, Policy, Population, Population and Population Related Phenomena, Populations Characteristics, Population Control, Population Dynamic, Population Growth, Population Policy, Population Programs, Programs, Public Policy, Recommendations, Research, Rural Population, Social Change, Social Evolution, Social Planning, Social Policy, Socio Economic Factors, Socio Economics, Southeast Asia, Southern Asia, Sustainable Development, UN, United Nations, Women's Right, Women's Status.
4	1	Public Participation

Table 2. Topics Cluster in Human Resource Development Research from Author Keywords

Cluster	Total Item	Items
1	12	Bangladesh, Capacity Building, China, Covid-19, Education, Human Resources, Human Resources Development, Job Satisfaction, Mental Health, Public Health, Public Policy, Training
2	9	Development, Evaluation, Ghana, Human Resource Development, Knowledge Management, Leadership, Local Government, Public Sector, Thailand
3	6	Employment, Higher Education, HRD, Mentoring, Saudi Arabia, Training & Development
4	2	Human Resource Management, Innovation
5	2	India, Performance
6	2	Malaysia, Training Evaluation

4.2 Who are the Most Cited Authors?

Numerous authors have written about this theme, according to the Scopus database. Some of them have more than one document, as we can see in Figure 4. Ismail, M. and Sugumar, S. N. with four published documents, they have both emerged as the highest ranked parties.

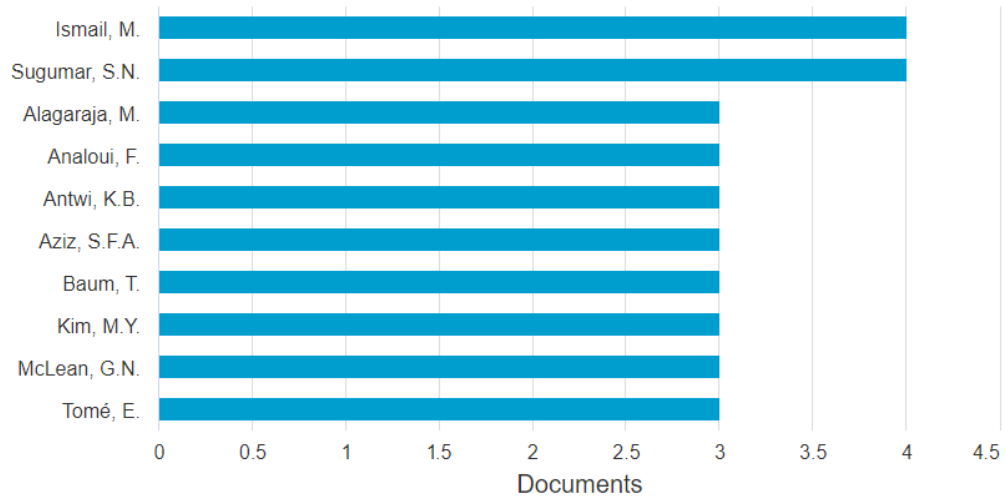


Fig. 4. Top Author from Scopus

Next, in order to show the importance of the work in research, we looked at the publications that had the most citations. Wright, B. E.; Davis, B. S. (2003) is in the top, as we can see in Figure 5. and Table 3.

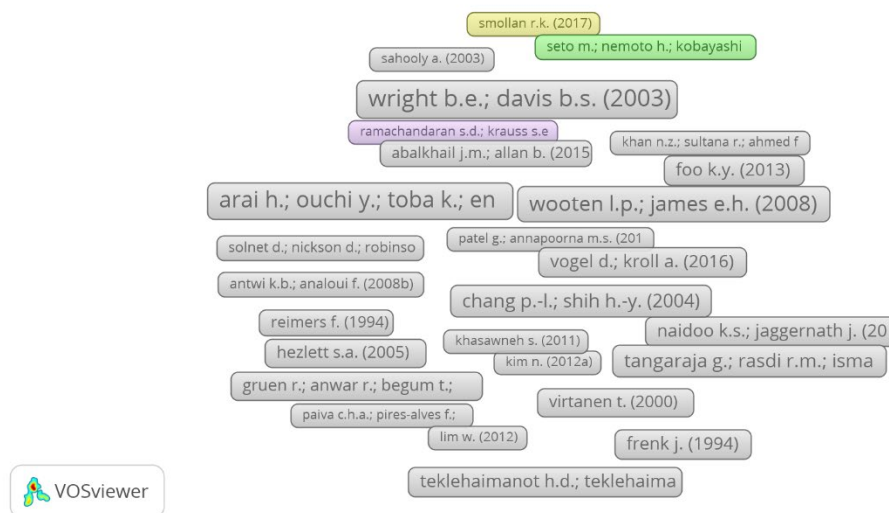


Fig. 5. Top Cited Documents from VOSViewer

The following Table 3 presents the details of Figure 5, where the ten publications with the most citations are displayed; these will be covered in more detail in the next subchapter.

Table 3. Author(s) With High Frequencies Cited in Human Resource Development Research

No	Author	Citations
1	Wright, B. E.; Davis, B. S.	244
2	Arai, H.; Ouchi, Y.; Toba, K.; Endo, T.; Shimokado, K.; Tsubota, K.; Matsuo, S.; Yumura, W.; Yokode, M.; Rakugi, H.; Ohshima, S.	235
3	Wooten, L. P.; James, E. H.	179
4	Kiggundu, M. N.	156
5	Wright, B. E.; Kim, S.	133
6	Killingsworth, J. R.; Hossain, N.; Hendrick-Wong, y.; Thomas, S. D.; Rahman, A.; Begum, T.	103
7	Chang, P. L.; Shih, H. Y.	102
8	Tangaraja, G.; Rasdi, R. M.; Ismail, M.; Samah, B. A.	102
9	Frenk, J.	96
10	Teklehaimanot, H. D.; Teklehaimanot, A.	90

4.3 The Most Significant Publication

This study is predicated on the idea that the works that have been cited the most in a particular time frame have the most impact. Citations are a standard method in academic research to acknowledge the sources of concepts, methods, and interpretations. They are also often used as a general measure of a paper's importance. Citation counts, however, can still be distorted. These numbers can be distorted by elements like self-citation, negative citations, research growth, and publication age [11]. Because of this, some bibliometric specialists typically compare the citation counts of papers with comparable publication ages rather than depending only on citation counts to assess the quality of a paper. Table 4 shows that the works with the highest number of citations were produced in the 2000s.

Table 4. Most Highly Cited Publications

No	Title	Source (Year)	Citations
1	Job Satisfaction in The Public Sector: The Role of the Work Environment	The Public Administration Review in America (2003)	244
2	Japan as the front-runner of super-aged societies: Perspectives from medicine and medical care in Japan	Proposal from The Subcommittee for Aging, The Science Council of Japan (2015)	235
3	Linking Crisis Management and Leadership Competencies: The Role of Human Resource Development	Advances in Developing Human Resources (2008)	179

The results of these publications can be resume as:

- a. According to the model, which accounted for two thirds of the variation in employee job satisfaction, the work context may be crucial in differentiating between employment in the public and private sectors as well as the source of any disparities in job satisfaction between sectors [12].
- b. Although Japan has made great progress in medical care thus far in an effort to improve survival rates, changes in the country's need for medical care are expected to occur on both a qualitative and quantitative level. Since illnesses in the elderly, especially in the very old, are frequently incurable, traditional medical care needs to

be updated to better fit an ageing society. In order to achieve this, either "hospital-centered medical care" must give way to "community-oriented medical care," which is in line with nursing care and welfare, or "cure-and support-seeking medical care," with treatments reprioritized to maximise the patient's quality of life (QOL), must replace "cure-seeking medical care," which focuses on treating diseases on an organ-specific basis [13].

- c. Each of the five phases of a crisis—signal detection, preparation and prevention, damage control and containment, business recovery, and reflection and learning—requires a complex set of competencies from executives who help their organisations recover. In this paper, we investigate leadership competencies at every stage of a crisis by utilising a qualitative research design and analysing businesses that are experiencing a crisis. Furthermore, this piece establishes a connection between the critical function of human resource development and the enhancement of organisational capabilities via crisis management initiatives [14].

4.4 Most Productive Countries/Regions

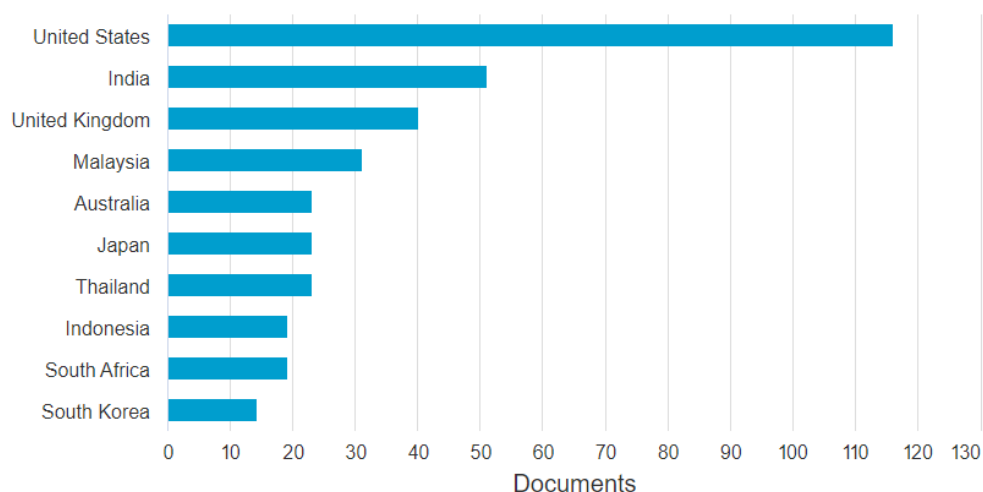


Fig. 6. Most Productive Countries/Regions (By Author Affiliation)

According to Figure 6, the United States is the nation or territory with the greatest amount of research done on HRD in the public sector. They released 116 documents, followed by 51 publications from India, and 40 publications from the United Kingdom. It's interesting to note that researchers in Indonesia, which ranks eighth globally with 19 publications published, were also drawn to this topic.

4.5 Discussion

Researchers have employed a variety of theories to examine human resource development. Table 5 below lists these theories. It goes without saying that future research on

this topic will be more focused and accurate now that we know which theories are appropriate to apply when talking about human resource development.

Table 5. The Theories

No	Theory	Author(s)	Source
1.	Social Exchange Theory	Mylona, E., Mihail, D. (2022)	[15]
2.	Human Capital Theory & Signalling Theory	Patel, G., Annapoorna, M.S. (2019)	[16]
3.	Public Management Theory: Social Learning Theory (SLT) & Social Exchange Theory (SET)	Kim, M.Y., Yu, H.J., Park, S.M. (2017)	[17]
4.	Economic Theory of Human Capital	Klase, K.A. (1996)	[18]

Moreover, as shown in Table 6 below, we also discovered that prior researchers had adopted a number of perspectives when addressing the research related to human resource development.

Table 6. The Perspectives

No	Perspective	Author(s)	Source
1.	A workforce localisation perspective	Alqahtani, M., Ayentimi, D.T., Dayaram, K. (2023)	[19]
2.	Employee-level perspective	Mylona, E., Mihail, D. (2022)	[15]
3.	The perspective of an internal evaluator	Russ-Eft, D.F. (2009)	[20]
4.	The perspective of the frontline local government	Antwi, K.B., Analoui, F. (2008)	[21]

5 Conclusion

Our research also identifies a core group of prolific writers who have supported the idea of disciplinary specificity with a wealth of empirical data. Their works have been widely cited over the years, pushing the boundaries of this idea in language pedagogy and discourse analysis and continuing to have an impact as the field of study grows. Instead of remaining on the outskirts, this field of study is becoming globally significant because authors connected to new research centres are influencing its direction.

Between 1986 and 2023, a number of research findings regarding human resource development were discovered. These findings are listed below.

- a. The subjects that are studied the most is Human Resource Development, either by analysing the co-occurrence of all keyword or just the author's keywords.
- b. The most cited authors are Wright, B. E. & Davis, B. S. (2003), where Ismail, M. and Sugumar, S. N. are the top writer with four published documents in Scopus.

- c. The most significant publication is *Job Satisfaction in The Public Sector: The Role of the Work Environment* written by Wright, B. E. & Davis, B. S. in *The Public Administration Review in America* (2003) which has been cited 244 times.
- d. The United States is the most productive nation or region according to publication. Indonesia is ranked eighth in the world with 19 published publications.

In order to enhance future research, we recommend utilising additional software, such as CiteSpace 5.8.R2 [22], Biblioshiny/Rstudio [23], or a research process and procedure in the form of Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement templates [24], to aid in the visualisation of bibliometric analysis results.

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