

A Bibliometric Study on the Role and Evolution of Strategic Training

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Abstract

Background: In a changing and renewed world in the fields of knowledge and technology, the importance of training becomes clear in developing the capabilities and skills of human resources to be able to keep pace with all of this and improve their performance. **Objective:** The purpose of this review is to examine the state of strategic training in the past two decades. **Research methods:** This bibliometric analysis uses the PRISMA program to summarize studies that dealt with strategic training in terms of its foundations and development. Scopus was chosen because it covers a wide area and because of its strong reputation as a resource for analyzing scientific articles. A complete keyword search yielded 16,381 publications in the database. When inclusion and exclusion criteria were applied, search results were limited to 2,048 relevant articles. **Results:** Strategic coaching research has continued to increase with the largest jump after 2019, indicating an increased focus on research. The list of major publications, governments and organizations contributing to this issue shows a global impact. The study focuses on the most prolific authors and search keywords, reflecting the interdisciplinary nature of strategic coaching research. **Conclusion:** Strategic training has become of great importance in human resource development, as evidenced by the increasing number of publications, the diversity of authors, and the focus on many fields, specializations, and keywords. This demonstrates the extent of cooperation and diversity of research in this sector. **Recommendations:** The research recommends further study to develop strategic training. Understanding the impact of strategic training on human resources development requires expanding the scope of knowledge and establishing clear and reference methodological rules.

Keywords: Strategic, Training

Introduction

The contemporary dynamic environment charged with competition emphasizes to institutions and organizations of different nature and size the importance of quality management and guidance, whether in the physical product itself or in the human resource on which every institution depends heavily, especially by the service sector. The knowledge and skills that distinguish employees or members of the organization are the main focus of the organization's performance and its ability to compete and advance. Therefore, institutions attach great importance to training courses, programs and initiatives in order to develop human resources. But it is important here to emphasize that the effectiveness of this training depends greatly on its consistency with each organization's human resource needs, organizational goals, and business strategy (Al Qudah, et al., 2018).

The comprehensive quality process and its management must be based on the employees or human resources in it because they carry out production and through them the quality of the organization's performance is measured. Therefore, focusing on them is the only way to achieve sustainability, as many organizations consider human resources to be the most valuable assets and therefore their capabilities must be invested, refined and utilized (García-Alcaraz, et al., 2019). In light of the changes and challenges that the world is witnessing today at all levels, which directly affect institutions and organizations and their human resources and thus their workflow and ability to continue and compete, and in light of the rapid cognitive and technological innovation, attention has become directed towards training and hopes are placed on it, especially strategic training that depends on Clear and well-studied rules and methodology. So that institutions in all fields can keep pace with all of this by developing their human resources according to the finest and latest knowledge and skills.

The importance of a comprehensive understanding of the role and development of strategic training is the basis of this review. This review followed another researcher work for instance (Samsul et al., 2023; Abuhassna & Alnawajha, 2023a; Abuhassna & Alnawajha, 2023b; Abuhassna et al., 2023; Abuhassna et al., 2022a; Abuhassna et al., 2022b; Van et al., 2021). The goal of this bibliometric analysis is to provide a comprehensive investigation of the foundations of strategic training and its development, with particular emphasis on discovering trends, standards, frameworks, models, and shortcomings in the current body of research. The main objective of this research is to conduct a comprehensive synthesis of relevant academic literature and provide a nuanced perspective on the bases of strategic training and development. This study seeks to make a scholarly contribution to the debate on strategic training by examining the complexities of this connection. In doing so, we hope that the field will see continued improvements and suggest informed training practices. Therefore, the aim of this bibliometric evaluation was to provide answers to the following research queries

- What is the distribution of the role and development of strategic training in the versions from 2012 to 2023?
- What academic publications are most relevant to the role and development of strategic training?
- What are the most influential countries in the role and development of strategic training?
- What are the educational institutions that have made the most significant contributions to studying the role and development of strategic training?

- Who are the authors who made the most important contributions to the field of the role and development of strategic training?
- What are the most prominent research terms related to the role and development of strategic training?

Methods

Research Design

This bibliometric analysis is based on PRISMA framework (Moher et al., 2010). This review aimed to a Bibliometric Study on the Role and Evolution of Strategic Training, top countries, top educational institutions, top journals, most prolific authors, and most trends and key words in this research area.

Identification

- Database Selection

This review took place on 2th January 2024, Scopus database was selected as the main database for this review. Scopus database was selected because it is one of the most powerful global databases for analyzing scientific paper.

- Search Strings

To ensure the retrieval of the studies selected, the researcher used exact key words, these keywords were (strategic and training", for instance TITLE-ABS-KEY (strategic AND training). Moreover, publication for the last eleven years were selected from 2012 to 2022, for instance "AND PUBYEAR > 2012 AND PUBYEAR < 2024 AND". In addition, subject area was limited to Social Sciences, and Arts and Humanities, for instance (LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "ARTS")). It is worth noting here that type of documents that were Article and Conference reviews, for instance AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE , "cr")). Publication in English were selected in this review, AND (LIMIT-TO (LANGUAGE , "English")).

Table 1

Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
the Role and Evolution of Strategic Training	Any other subjects were excluded.
2012 – 2023	All publications before 2012 were excluded. And 2024 publications were excluded.
English language	Any other languages
Articles	Thesis, conferences, books, book chapters blogs.
Journals	Any other source was excluded.

Screening and Selection

The main keywords used were "strategic and training", thus, the initial search provided 16,381 documents. After applying the inclusion and exclusion criteria as shown in table 1 the publications were reduced to 2,048 as the final search, due to the fact that 14,333 were excluded.

Inclusion and Reporting

The findings of this bibliometric analysis will be reported based on the PRISMA framework as seen in Figure 1. (Moher et al., 2010). Then, in the next section, the research questions will be addressed in a clear, systematic manner.

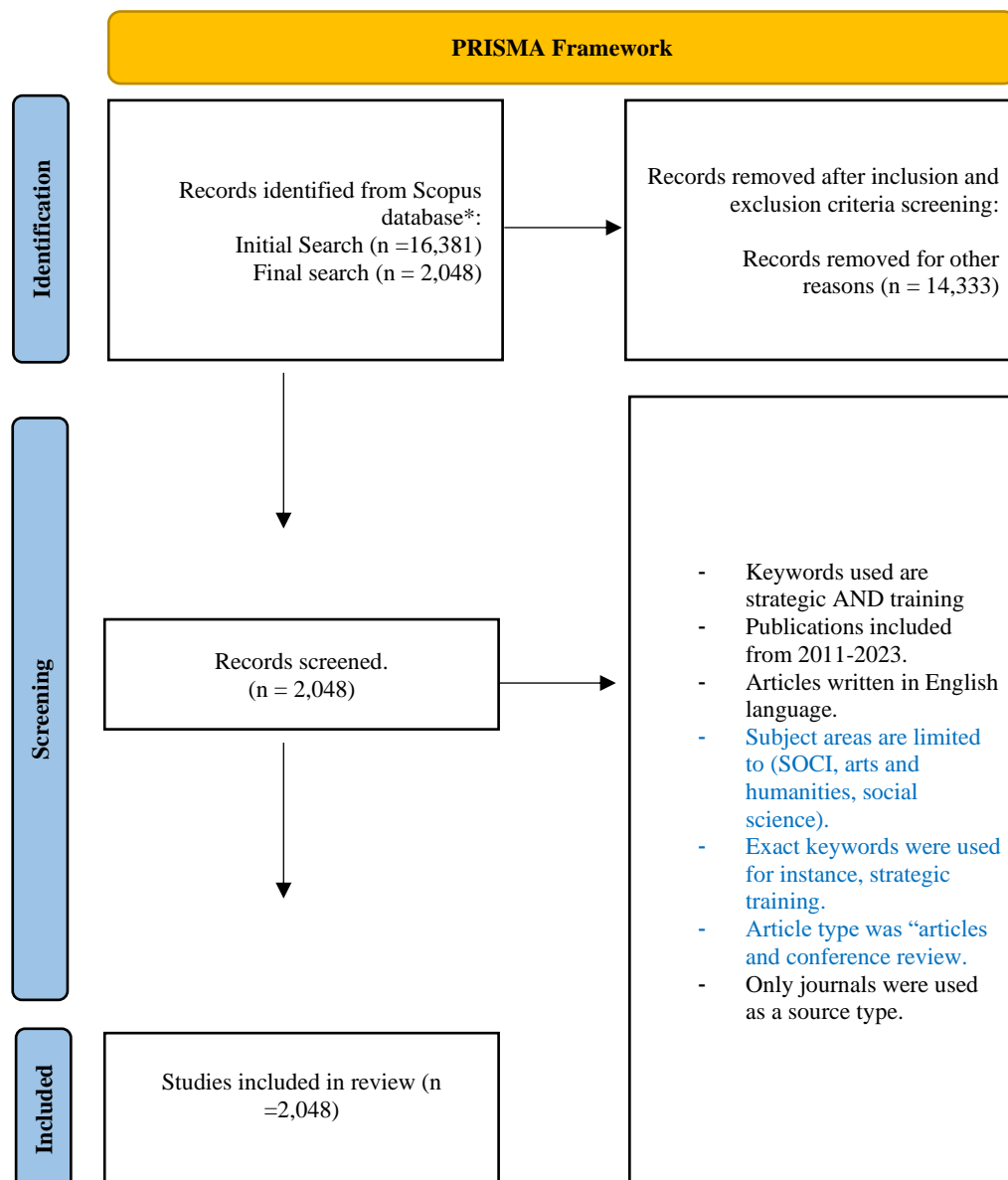


Figure 1: Prisma framework for this review

Results

The results of a bibliometric investigation on a topic the Role and Evolution of Strategic Training. Our study encompasses a decade of research and offers valuable insights into several aspects of this Our study encompasses a decade of research and provides valuable insights into many aspects of this topic that is important to all disciplines and is constantly evolving. It includes prominent subject areas, publishing patterns, influential journals and nations, key academic institutions, prolific authors, and main research keywords. The objective of this synthesis is to delineate the Role and Evolution of Strategic Training research, ascertain the fundamental components that propel scholarly investigation, and provide a

comprehensive perspective for global endeavors to understand the impact of strategic training environments on human resources performance in various sectors.

The Distribution by Years

The following research question will be addressed in this section: "What is the distribution of the Role and Evolution of Strategic Training from 2012 to 2023?" By analyzing the offered data, we can address the first study inquiry about the distribution of the Role and Evolution of Strategic Training from 2012 to 2023. The number of publications pertaining to the Role and Evolution of Strategic Training has shown a discernible upward trend over time, as indicated by the statistics. There has been a consistent annual growth in the number of publications since 2012, when it reached 94. Following 2020, this expansion becomes more conspicuous, reaching its pinnacle in 2023 with a total of 245 publications. Particularly in recent years, this suggests a substantial increase in interest and research concentration in this field.

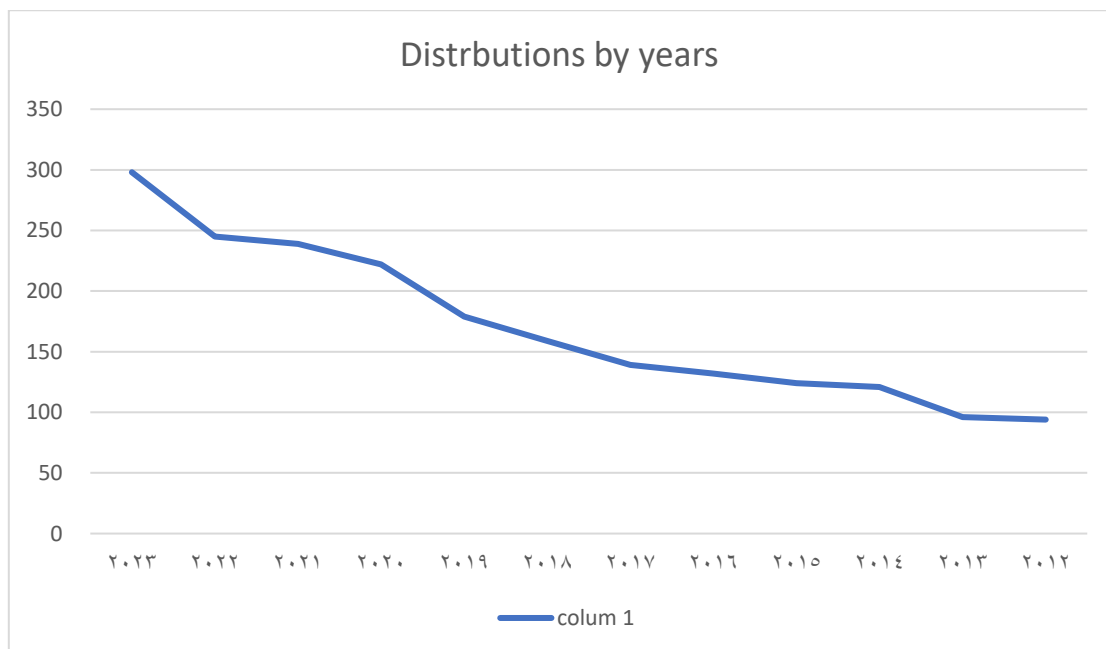


Figure 2: distribution by years.

The data shown in Figure 2. The distribution of publications concerning the Role and Evolution of Strategic Training from 2012 to 2023 has a significant upward trajectory, suggesting a growing scholarly focus on this field. In 2012 publications were 94 in the research area of the Role and Evolution of Strategic Training, and that number has risen annually after then. The figure has escalated to 139 by 2017, and this upward trend persisted consistently. A notable upswing in publishing output was seen beginning in 2020, when 222 works were published. This surge accelerated to 239 in 2021, 245 in 2022, and culminated in 298 works in 2023. The observed upward trajectory, specifically the substantial surge over the past four years, indicates an elevated emphasis on Strategic training research. The reason for this may be due to global trends towards increasing the use of electronic training platforms due to the Covid-19 pandemic. The reason for this may also be due to technical developments and rapid technological progress, especially with regard to the subject of artificial intelligence and its applications in the fields of training. This helped open new horizons for scientific and applied research on training development methodologies and its impact on human resources

management and developing the skills of individuals and institutions. Which indicates the emergence of a broad field of research and study characterized by the development of training curricula and techniques in order in order to effectively manage and develop human resources.

The Most Relevant Journals

Regarding the second research inquiry, which are academic journal, publications and authors are most pertinent to the Role and Evolution of Strategic Training? A wide array of publications that provide substantial contributions to this topic are evident in Table 2, according to the data supplied for the years 2012 through 2023. Therefore, this section will answer this question clearly and precisely.

Table 2

Top 10 journals in the Role and Evolution of Strategic Training research

Journal	TP	TC	CITE SCORE (2023)	Most cited article	Times cited	Publisher
Sustainability (Switzerland)	54,697	349,230	6,4	<u>Green Closed-Loop Supply Chain Networks' Response to Various Carbon Policies during COVID-19</u>	67	Multidisciplinary Digital Publishing Institute (MDPI)
Emerald Emerging Markets Case Studies	516	169	0,3	<u>Zomato: shaping the future of food</u>	2	Emerald Publishing
Academic Medicine	1,475	10,294	7,0	<u>Culinary Medicine as Innovative Nutrition Education for Medical Students: A Scoping Review</u>	12	Wolters Kluwer Health
BMC Medical Education	2,869	3,116	4,6	<u>A systematic scoping review of reflective writing in medical education</u>	11	Springer Nature
Human Resources for Health	400	3,031	7,6	<u>Missed nursing care in acute care hospital settings in low-income and middle-income countries: a systematic review</u>	9	Springer Nature
Industrial and Commercial Training	112	305	2,7	<u>Talent management strategies and functions: a systematic review</u>	11	Emerald Publishing
Worldwide Hospitality and Tourism Themes	267	1,133	4,2	<u>Marketing strategies for the tourism industry in the United Arab Emirates after the COVID-19 era</u>	9	Emerald Publishing
Development and Learning in Organizations	319	229	0,7	<u>The influence of technostress on the intention to use blockchain technology: the perspectives of Jordanian auditors</u>	10	Emerald Publishing
Environment, Development and Sustainability	2,363	22,843	9.7	<u>Do financial development, economic growth, energy consumption, and trade openness contribute to increase carbon emission in Pakistan? An insight based on ARDL bound testing approach</u>	59	Springer Nature
American Journal of Pharmaceutical Education	664	2,335	3,5	<u>Preparing Pharmacy Educators as Expedition Guides to Support Professional Identity Formation in Pharmacy Education</u>	8	American Association of Colleges of Pharmacy

TP= Total publications, TC= Total citations

Table 2 highlights the journals most closely related to the topic of strategic training during the years extending from 2012 to 2023. The most productive prolific journal in the field of the Role and Evolution of Strategic Training was "Environment, Development and Sustainability" with 9,7 cite score, it is a scientific journal published by the Multidisciplinary Digital Publishing Institute (MDPI). This journal also achieved a total that distinguished it from other journals in the number of articles amounting to 54,697 and 349,230 citations. The most prominent article in this journal was Green Closed-Loop Supply Chain Networks' Response to Various Carbon Policies during COVID-19, which achieved an impressive number of citations of 67.

In second place came "a Human Resources for Health journal" come with 7,6 cite score. This journal is published by Springer Nature. This journal achieved a total score of 400, with 3,031 citations and a score of 7.6. The most prominent articles of this magazine were an article entitled: Missed nursing care in acute care hospital settings in low-income and middle-income countries: a systematic review. The article achieved 9 citations. In third place is the journal Environment, Development and Sustainability, which is also published by Springer Nature. This journal achieved a total of 2,363, 22, and 843 citations. With a high citation score of 9.7. Also topping the list of its articles is an article entitled: Do financial development, economic growth, energy consumption, and trade openness contribute to increase carbon emission in Pakistan? An insight based on ARDL bound testing approach, with 59 citations.

On the other hand, "Industrial and Commercial Training" journal publications were 112 publications only with the least number of publications. With a number of citations of 305, this journal is published by Emerald Publishing. But what is striking about this magazine is that the number of citations in the article: Talent Management Strategies and Functions: A Systematic Review, which topped the list of articles in this magazine, achieved 11 citations, and this number is equivalent to the number achieved by the article: which topped the first place in the BMC Journal of Medical Education previously mentioned. It is also striking from the previous table 2 that the journal Academic Medicine, which included 1,475 articles, achieved 10,264 citations. This is a large number if we compare it with the number of citations in the BMC Medical Education journal, where this number was 3,116, despite the fact that the number of articles in this journal is greater, as it reached 2,869 articles.

On the other hand, the Emerald Emerging Markets Case Studies journal contained 516 articles, but the number of citations from this journal was the least among the rest of the other journals, especially the Journal of Industrial and Commercial Training, which had only 112 articles, but it exceeded the previous journal with 315 citations. However, what these two journals have in common is that they are published by the same entity or organization, Emerald Publishing.

The Most Significant Countries

In order to examine the third study inquiry, which nations have the most impact on the Role and Evolution of Strategic Training research area? An analysis of the data presented reveals a heterogeneous worldwide impact, as seen in Figure 3. Distribution of publications by nation.

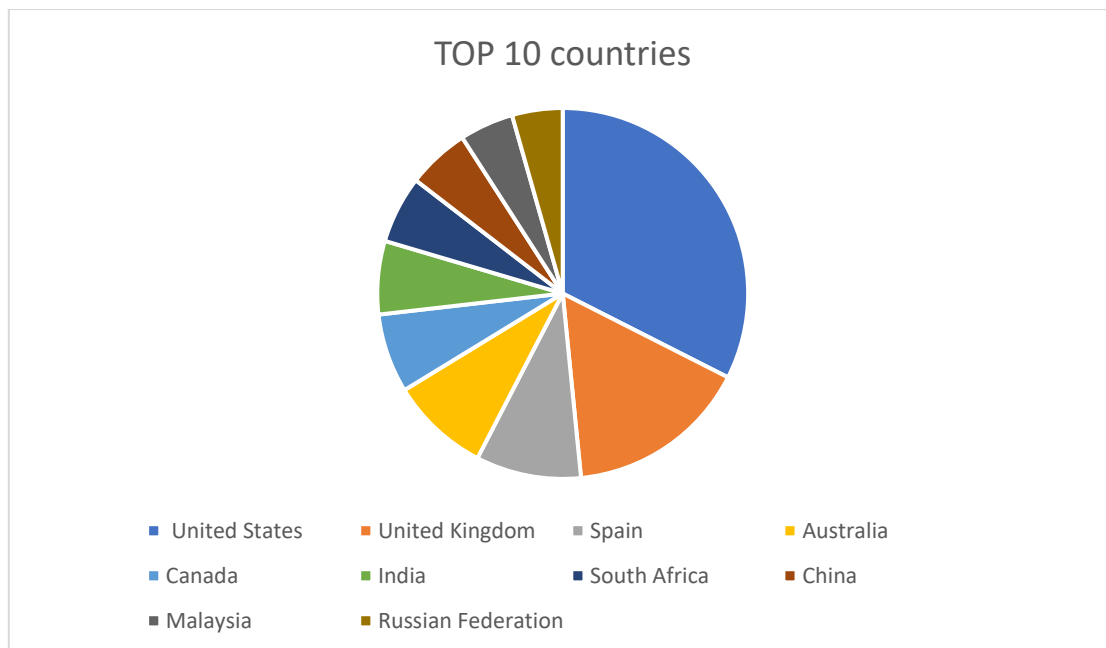


Figure 3. Publications distributions by countries

Through Figure 3, which shows a list of the top ten countries in the world in which the most research was conducted on the topic of the Role and Evolution of Strategic Training, we can extrapolate a set of important indicators. The United States had the largest number of articles, with 442 articles. This number is very large compared to other countries, and perhaps we can explain this for several reasons, including: the size of this country, the large number of higher education institutions in it, and the presence of a number of international universities. Famous international academies and institutes in the field of training in various sectors and specializations, rapid technological progress, and the presence of large numbers of academics and researchers residing and working in this country of various nationalities. In second place after the United States in terms of the number of articles is the United Kingdom, but with 212, but with a difference of approximately 50% decrease from the number of articles in the United States. This is likely due to the superiority of the United States in terms of the number of universities. But in general, the United Kingdom's ranking second in terms of the number of research papers also reflects a broad interest in the issue of strategic training and the multiplicity of institutions that employ training as an important factor in developing human resources performance and improving production.

In general, it can be noted that the difference in the number of research in other countries that occupy the remaining eight positions is not very large if each country is compared to the next. It is found that the number of research papers in: Spain, Australia, Canada, India, South Africa, China, Malaysia, and the Russian Federation, respectively, with the country having the largest number of articles: 125, 118, 94, 87, 80, 74, 64, 60.

In general, we can say that the total number of articles in the previous ten countries, according to Figure 3, amounting to 1,361 articles reflects an increasing interest in the quantity and type of research in the field of strategic training. It is expected, by extrapolating reality, that the coming years will bring with them more research interest in this field, due to the strategic importance that training has for the development and management of human

resources in all specialties, and because of the rapid technical progress that this world is witnessing day after day.

The Most Significant Educational Institutions

The data presented in answer to the fourth research question—"Which educational institutions have made the most notable contributions to the study of the Role and Evolution of Strategic Training?"—emphasizes a number of such institutions. As seen in Figure 5, Table 3, and Figure 4.

Table 3

Top educational institutions in the area the Role and Evolution of Strategic Training research area

Educational institution	TP	Country
University of Johannesburg	14	South Africa
Michigan State University	14	United States
University Kembangan Malaysia	13	Malaysia
University of South Africa	13	South Africa
Kazan Federal University	12	Russian Federation
University de València	11	Spain
Harvard Medical School	11	United States
The University of Manchester	11	United Kingdom
University of Washington	10	United States
National University of Singapore	10	Singapore

TP= Total publication

As shown in Table 3, most prolific education institutions in the Role and Evolution of Strategic Training. United States has the leading country in this area of research, due to the fact that 3 educational institution based on United States, for instance, Michigan State University, Harvard Medical School, and University of Washington, these institutions Total publications (TP) were as follow, 14, 11, 10. Secondly, South Africa followed United States with 2 leading institutions University of Johannesburg, and University of South Africa, with 14, and 13 total publications, finally, In third place are five countries: Malaysia, Russian Federation, Spain, the United Kingdom, and Singapore in this research area, Each country is represented by the following institutions; University Kembangan Malaysia, Kazan Federal University, University de València, The University of Manchester, National University of Singapore. With 13, 11, 12, 11 and 10 total publications. The regional distributions of publications are shown in Figure 4.

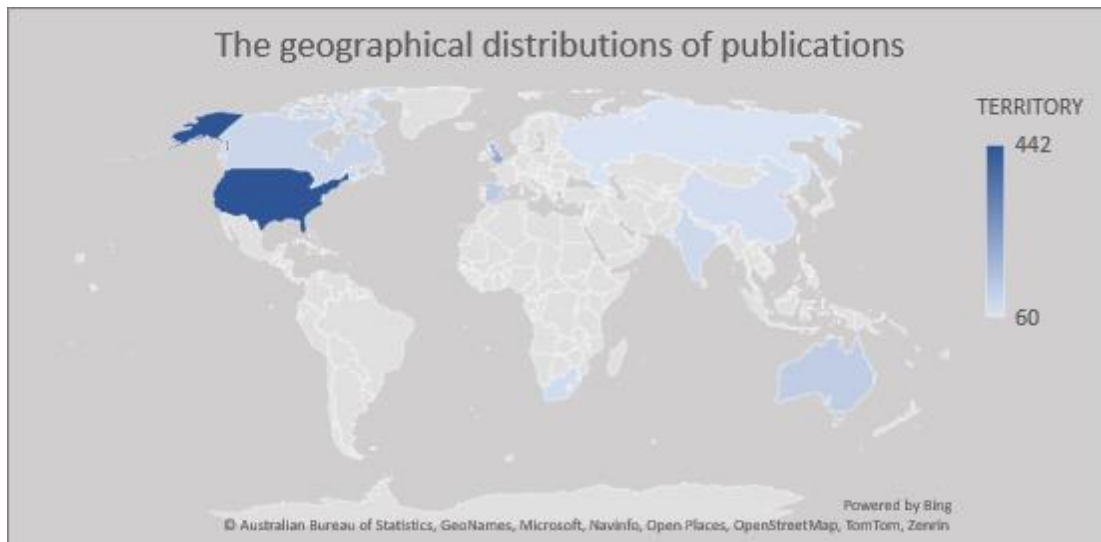


Figure 4: the geographical distributions of publications

The United States has shown remarkable progress in the field of the Role and Evolution of Strategic Training, through 35 research papers distributed among three institutions: Michigan State University, by number of 14 research papers, Harvard Medical School, by number of 11 research papers, and the University of Washington, by number of 10 research papers. South Africa comes in second place after the United States with 27 research papers. This number was distributed among two universities: the University of Johannesburg, with 14 papers, and the University of South Africa, with 13 papers. This indicates the growing interest in research in this field in both countries, and perhaps this also reflects awareness in research circles of the importance of framing strategic training and setting clear rules for it so that training achieves more effectiveness in developing and managing human resources skills. While Singapore was the least country in terms of the number of research compared to other countries, as the number of research was 10 research. Although the difference between it and other countries such as Spain and the United Kingdom is a small difference with only one search.

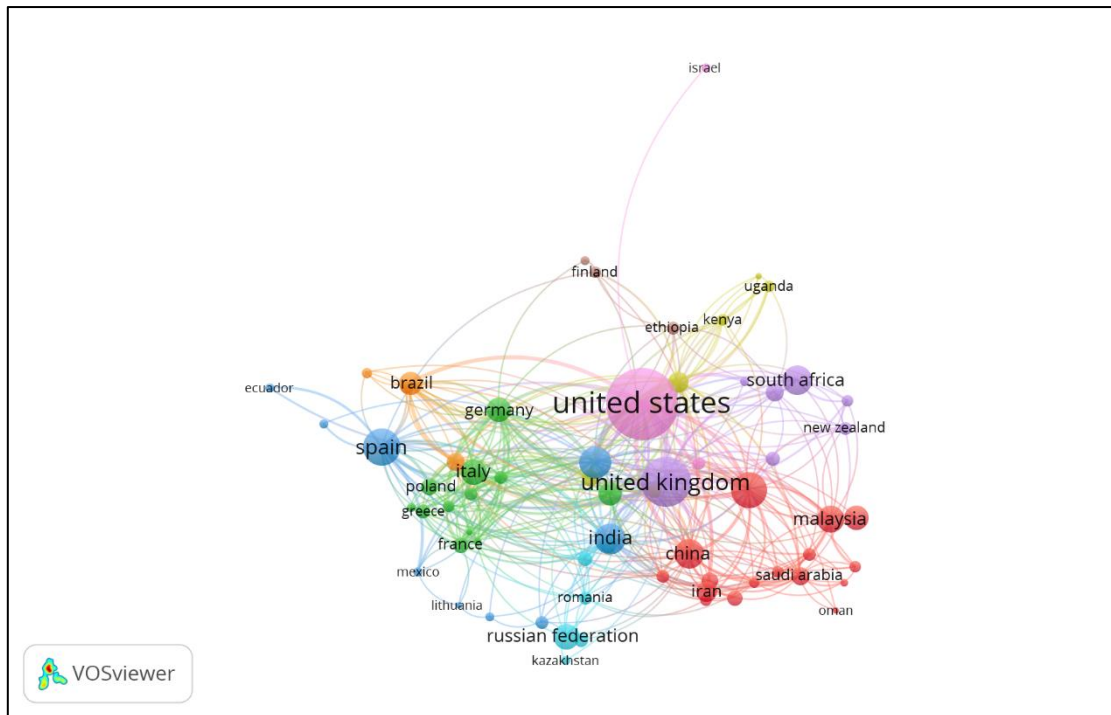


Figure 6: the geographical distribution based on Vos Viewer software

Figure 6 indicates the distribution of institutions that issued research in the field of strategic training across several countries from different continents around the world. This confirms the existence of diversity in the aspects addressed by this research through methodologies, frameworks, rules, aspects of development, and the use of modern knowledge and technologies, among others, in the fields of training in various specializations. We can say that this diversity has a very major role in documenting and tracking the path of strategic training over a full decade and thus directing future research paths. It is also clear here that Arab countries are absent from the top list in terms of institutions and research in the field of strategic training, which reflects the need for more research in these countries in order to identify some of their experiences in this field.

The Most Prolific Authors

Regarding the fifth research inquiry, "Which Authors have produced the most substantial contributions to the field of student performance in the Role and Evolution of Strategic Training?" the data shown in Table 4 underscores a number of authors who have made contributions worth mentioning.

Table 4

The top 10 authors the Role and Evolution of Strategic Training research area

Author	Year of first publication	TP	h-index	TC	Current affiliation	Country
Besley, John C.	2004	103	31	3,113	Info Michigan State University, East Lansing	United States
Singhania, Monica	2006	47	12	612	University of Delhi, New Delhi	India
Adomako, Eva	2016	8	3	17	Yale University, New Haven	United States
Chan, Teresa M.	2011	244	31	3,264	Info McMaster University, Hamilton	Canada
Dudo, Anthony D.	2007	47	22	1,761	The University of Texas at Austin, Austin	United States
Wong, Rex	2011	29	7	199	University of Global Health Equity, Kigali	Rwanda
Abuznadah, Wesam T.	2008	15	7	173	Saudi Commission for Health Specialties, Riyadh	Saudi Arabia
Alison, Laurence J.	1994	159	35	3,315	University of Liverpool, Liverpool	United Kingdom
Alsaywid, Basim Saleh	2010	40	10	334	Saudi National Institute of Health, Riyadh	Saudi Arabia
Altinay, Fahriye	2004	103	14	689	Computer Education and Instructional Technology Department	Kyrenia, Türkiye

TP= Total publication, TC= Total citation

Table 4 shows the top ten authors on the topic of the role and development of strategic training. Beasley, John C started in his research career in 2004 he has written 103 publications and achieved an h-index of 31 with 3113 citations. This confirms the scientific value that he adds to his current university, Info Michigan State University in the United States. After that, Singhania, Monica from the University of Delhi in India, who began his research in 2006, achieved 612 citations across 47 publications with a 12 h-index. Continuing the list, we come to Eva Adomako, who started publishing in 2016 and has 8 publications with 3 h-index and 17 citations, and he also belongs to Yale University in the United States.

Then Chan, Teresa M. catches the eye, who achieved a 31 h-index with 3,264 citations across 244 publications. This is a great achievement for him, as he began his research career in 2011. This also makes the researcher of great research value to Info McMaster University, Hamilton. As for Dudo, Anthony D, who began his research in 2007, he wrote 47 publications with 22 h-index and 1,761 citations, which reflects the importance of the presence of this researcher at

The University of Texas at Austin in the United States. Wong, Rex from University of Global Health Equity, in Rwanda Started publishing in 2011 who wrote 29 publications with 199 publications and 7 h-index. Abuznadah, Wesam T., who began his research career in 2008, has 15 publications and obtained 7 h-index and 173 citations. In our opinion, the presence of this researcher at the Saudi Commission for Health Specialties in Saudi Arabia is a good opportunity to achieve greater clarity on the issue of strategic training in the Arab region. This can also be said for the researcher Alsaywid, Basim Saleh, who is also affiliated with the Saudi National Institute of Health in Saudi Arabia and has 40 publications since he started in 2010 and has achieved 334 publications and 10 h-index. Alison, Laurence J. stands out on the list with a very high h-index 35 and a very good number of citations, reaching 3,315 citations across the 159 publications he has published since he started in 1994. The year this researcher started in 1994 and the h-index he achieved gives him extensive experience in this field and this reflects his importance to the University of Liverpool, and his role in the process of scientific research in the United Kingdom. Altinay, Fahriye has achieved an impressive number of citations, 689 since she started in 2004 through 103 publications and 14 h-index. which makes the presence of this researcher rich for the Computer Education and Instructional Technology Department in Turkey, especially in the field of linking training development with techniques and technology, this is vital and very important in this era that is witnessing rapid development in the fields of technology.

It can be said, through the research contributions of the aforementioned researchers and others, that strategic training, through diversity in specializations, geographical locations, and institutions, has received very good attention, and this indicates the impact of this researches in developing training. This also encourages future research to develop a clear and comprehensive vision as a general methodology for training by benefiting from and adding to previous research.

The Primary Research Keywords and Trends

To answer the sixth question: "Over the last decade, what have been the most prominent research terms concerning the Role and Evolution of Strategic Training?" Figure 6 shows the main search terms and their frequency of occurrence, as this is evident from the information displayed in the following image.

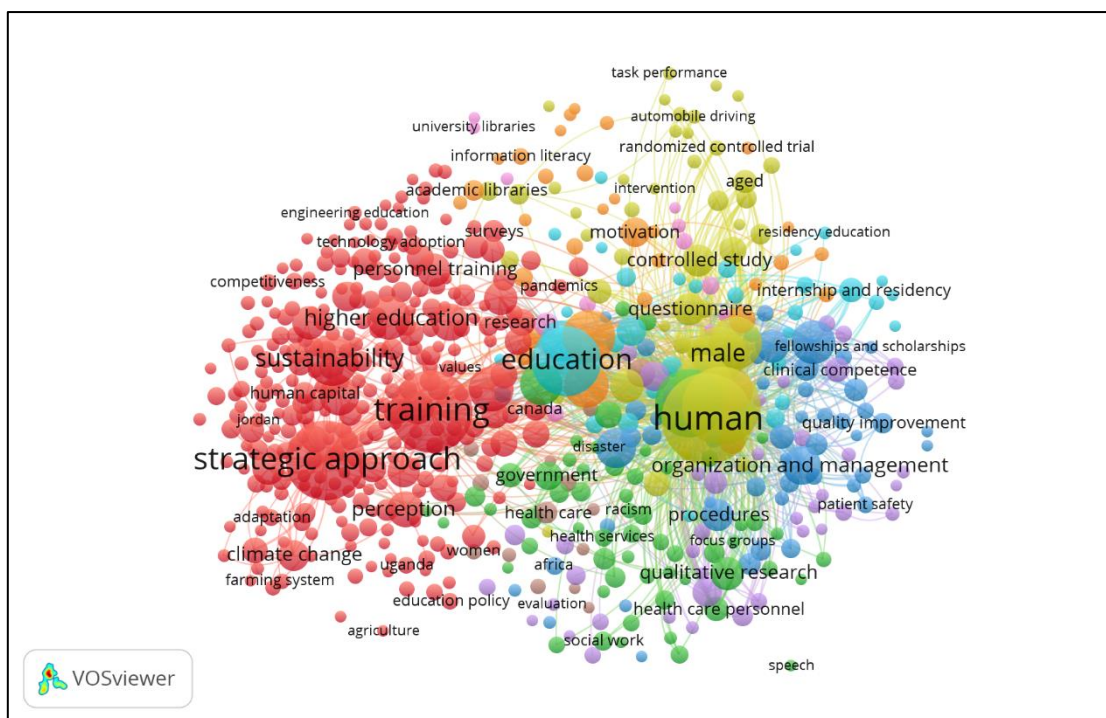


Figure 6: The primary research keywords and their occurrences

Figure 6 shows the frequencies of key search terms over the past decade, where there were a variety of search keywords related to the topic of strategic training. This confirms the great interest this field has received in several sectors and through several aspects. The term human emerged as the most frequent keyword, occurring 3,448 times, followed by the term humans, which is very close to it, occurring 2,686 times. The repetition of these two terms as the most important terms from our point of view is natural, as strategic training primarily targets human resources in all sectors and emphasizes at the same time that developing and improving production depends to a large extent on developing and improving capabilities for human and his skills. The term article was mentioned 2134 times, which indicates its prominent importance in the field of scientific research. The terms female and male come in next place, with frequencies of 1726 and 1642 respectively, which indicates the great focus also in the field of scientific research on gender, which enhances the value of researches in identifying differences between the sexes in this field under consideration.

Regardless of the inductive view of the previous form in terms of arranging the terms according to the number of times they are repeated, if we look at the matter from another angle, we find that among the most common or repeated terms, terms appear that meet or are close to each other in terms of meaning, field, and specialization, and among these terms are education, which occurred 1,553 times, and learning, which occurred 1,012 times. Likewise, the term medical education was repeated 867 times, and this confirms the interest of researches in the field of education and learning in general in the topic of strategic training. Among the terms that were most frequently repeated and closest to each other were the strategic approach, which was repeated 1,376 times, and strategic planning, which was repeated 523 times, as they indicate the importance of strategic framing in the fields of training.

On the other hand, one of the striking terms is the term “adults,” which was repeated 1,491 times, which also indicates that most of the groups that research in this field has focused on are adults, and this may be due to this group in particular needing more training and practice to obtain important experiences that lead to improvement. In performance and production. The repetition of terms such as organization and management, which were repeated 764 times, leadership, which were repeated 682 times, and decision making, which were repeated 573 times, indicates the great emphasis given to organization and management skills, leadership skills, and skills of decision making in the field of training. It is also worth noting here that the repetition of terms such as human experiment 970 times, questionnaire 507 times, and interview 506 times, refers to the most common research tools used in scientific research. In general, a diversity of fields of scientific research related to the subject of training can be extrapolated, in addition to the close connection of this researches with human resources.

The Most Important Subject Area

With the aim of investigating the seventh question of this research: “Which topic area is the most critical in terms of the Role and Evolution of Strategic Training?” Figure 7 shows the most important topics based on the number of research on each topic or field.

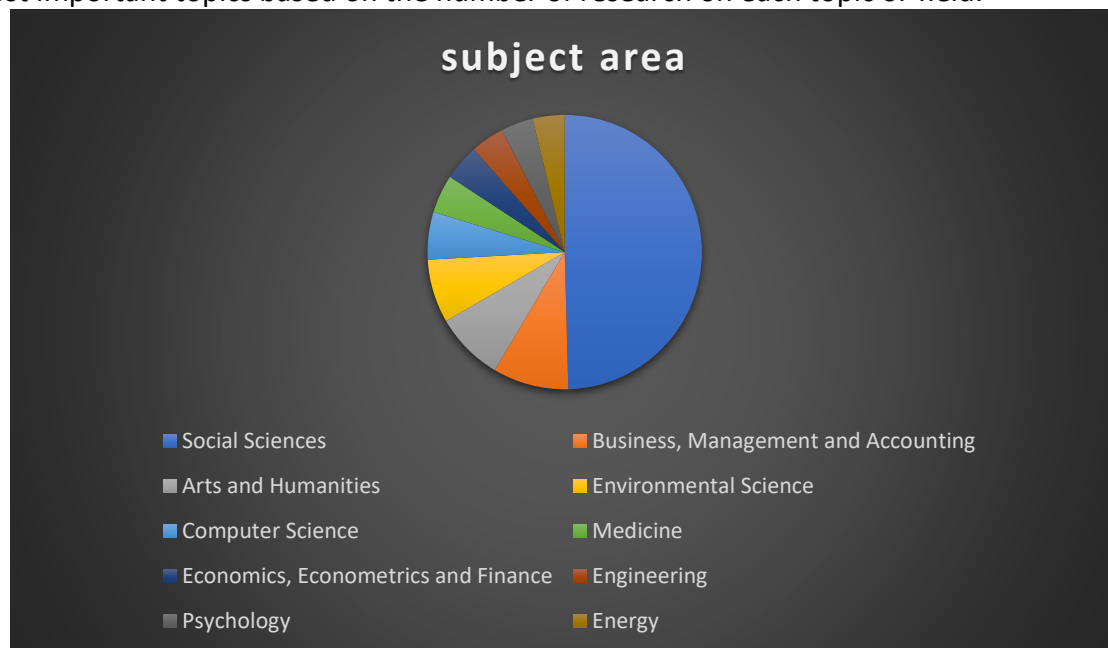


Figure 7: The most important subject area

It is clear from Figure 7 that 50% of the research was conducted in the field of Social Sciences, with the number of researches reaching 1,979. This is a very strong indicator of the focus of research in this field on training because of its importance and its close connection to the social sciences. In second place comes the field of Business Management and Accounting, with 356 research papers, as training is an important fundamental focus in this field, and thus this reflects the awareness of researchers and specialists. In third place are the arts and humanities, with 324 papers, followed by environmental sciences, with 299 papers, and computer sciences, with 224 papers. This indicates the focus of researchers and specialists in these fields on training also in terms of its rules and development.

Continuing the analysis of Figure 7 above, we find that the number of research papers in the field of Medicine is 180, in the field of Economics, Econometrics and Finance is 169, in Engineering is 158, In Psychology, 152 papers, and in Energy, 150 papers. It is good to have these numbers of research papers in each of them. But at the same time, this confirms the need for more research related to strategic training in these areas, especially if we compare these numbers with the numbers of research conducted in the field of social sciences, for example.

The results obtained through this bibliometric analysis revealed a wide and valuable collection of scientific articles that show us a comprehensive and integrated picture of the rules and development of strategic training. Therefore, this number of research, the multiplicity of countries and institutions participating in it, and the spread of a number of topics and keywords emphasize the importance of strategic training and the importance of defining its rules and striving to develop it. The results also shed light on the multiple disciplines that have investigated the topic of strategic training, indicating the great efforts made by researchers, academics and professionals from various countries. In light of this, it can be said that the importance of this research is not limited to the important insights it provided on the subject, but rather that this research is considered a basic base from which a group of future inquiries and research gaps that can effectively influence the direction of research paths in the future.

Discussion

The bibliometric study detailed in this article provides a comprehensive perspective regarding the foundations and development of strategic training. The results demonstrate growth and progress in strategic training in multiple disciplines and fields through a variety of contributions from various countries and organizations, in addition to a number of academics and researchers.

Trends in Publication and Geographic Distribution

The noticeable increase through this bibliometric study in scientific research related to the rules and development of strategic training confirms the increased academic focus in this field. By extrapolating reality, it can be said that this increase in the research record is the result of the scientific and cognitive revolution in various fields and rapid technological development, and therefore there are various bodies and entities that need to employ cognitive and technological expansion in training in various specializations with the aim of developing and managing human resources. This, in turn, emphasizes the importance and necessity of continuing research and study in this field. There is a large group of research contributions from countries with scientific standing and global rates of progress in several fields, such as the United States of America, the United Kingdom, Spain, Australia, and others. This emphasizes the necessity of conducting more research to study the interaction and use of different environments of knowledge and renewable technology in the fields of training in accordance with the prevailing culture, which provides a large number of points of view, visions and the exchange of experiences.

Influential Journals and Educational Institutions

This study has highlighted the most important and famous publications and academic institutions that issue important research on strategic training, its development, and its rules. This data from these publications and institutions is of great importance to academics,

researchers, specialists and even students in the field of training. Who would like to conduct more cutting-edge research, especially in this field. Accordingly, the strong influence of these publications and institutions in the field of scientific research and their ability to draw clear scientific and methodological plans and policies for the future of strategic training is evident.

Prolific Authors and Research Keywords

The ongoing efforts and achievements in the field of scientific research on strategic training, which became clear through this study, deserve praise and appreciation. These researches provide a clear vision about the current status of this field and at the same time constitutes a basic basis from which to start in the future development and improvement of strategic training. In addition, analysis of keyword excerpts obtained from primary sources provides valuable insights into the breadth, complexity, and relevance of this topic to multiple different themes, including topics such as "human," "humans," and "training." When these are linked to other terms such as "education", "learning", "medical" education, and "organization and management", this connection demonstrates the human dimensions of the topic related to human resources in multiple disciplines, and the emergence of terms such as "strategic approach" and "strategic "planning" refers to giving the strategic aspects of training high importance and value.

Subject Areas and Their Implications

The research covers a variety of topics, and sheds light on strategic training and its importance in many disciplines, especially in the field of social sciences, arts, and humanities. Therefore, it is clear that training is of great importance, as various institutions rely on it to develop the skills of their human resources. Linking training to effective strategies and keeping it abreast of continuous scientific and technological progress is extremely important in developing training and setting clear rules to follow.

In summary, the results of this bibliometric study provide a comprehensive depiction of the current status and future direction of scientific research regarding strategy training. In addition, this study is crucial for shaping the future of training, as the information provided can support institutions and specialists in developing clear and purposeful policies for training, and therefore it is necessary to remain constantly informed of the progress of scientific research in this field.

Summary of the results of this review

The following table shows a summary extracted from this research article, which conducts a comprehensive analysis of the foundations of strategic training and monitors its development over the past two decades as well as potential future developments. The data was classified into important areas that include discoveries, effects, patterns, and future plans. These classifications provide a comprehensive understanding of the scholarly interests, geographic distribution, primary authors, and focus of a particular topic in the field of strategic training. This research aims to determine the current situation and predict future paths in this field, which is renewed with renewed knowledge, as shown in Table No. 5.

Table 5

A comprehensive study of the foundations of strategic training and its development: the most important discoveries and future prospects

Aspect	Findings	Implications	Trends	Future Agenda
Publications	Continuous increase in publications, especially after 2017. In 2023, the largest number of publications was produced (298).	It has become clear that there is an increasing focus on strategic training, especially with the renewed cognitive and technological development and the need for institutions to develop their human resources effectively, especially with the presence of the element of competition.	Continuous annual increase in publications, which between 2019 and 2020 reached 222	Continuous research to understand strategic training, its rules, development, and its impact on improving human resources performance.
Journals	Important periodicals include: "Environment, Development and Sustainability", "a Human Resources for Health journal" and the journal Environment, Development and Sustainability.	Academics and specialists who seek to establish and develop effective rules for strategic training should refer to these periodicals.	Wide-ranging contributions from a variety of journals, with an emphasis on developing training and providing important strategies.	Conduct more scientific research to develop training and verify the practices that have the most impact on developing and improving human resources skills.
Countries	The major contributing countries are: the United States, the United Kingdom and Spain.	There are many ideas and proposals that keep pace with continuous cognitive development in order to develop training through scientific research	Increasing research contributions from several countries on a global scale.	International cooperation to develop strategic training through mutual benefit from multiple cultures and formulating a general and comprehensive global

		in many parts of the world.		framework that can then be adapted to each society or institution.
Educational Institutions	The University of Johannesburg in South Africa and Michigan State University in the United States are among the most contributing institutions	Academic institutions play an important role in advancing strategic training research.	Strategic training research is also well produced in a number of countries, including Australia, Canada and India.	It is very important to encourage other institutions around the world to participate in research related to strategic training.
Authors	A number of distinguished and emerging scholars have contributed to this topic, and Beasley, John C, Singhanian, Monica and Eva Adomako have contributed clear and important research efforts.	This article highlights the valuable efforts and achievements of individual researchers on the topic of strategic training.	There is a group of capable and new researchers who contribute their research in this field.	It is very important to provide researchers with the necessary support, appreciation and facilities in order to encourage further progress in strategic training
Keywords	Here are some of the most important keywords: "human", "humans", "article", "female", "male", "education", "adult", "training", "strategic approach".	This research reflects the focus on issues related to the human or human resource, education, the most important skills necessary for human resource development, and strategic approaches in the context of strategic training.	This reflects the focus in the subject of strategic training on important things such as: the human being or human resource and the skills necessary to develop it and improve its performance, especially in the education stage, and the most effective	There is a need for more research in the field of strategic training, especially with regard to improving training, selecting the most effective strategic approaches, and adapting them according to the field, specialization, or training objectives.

			strategic approaches in training.	
Subject Areas	In order of importance, the most important fields or specializations, in order, are: Social Sciences, Business, Management and Accounting, Arts and Humanities, Environmental Sciences, Computer Science, Medicine, Economics and Econometrics and Finance, Engineering, Psychology, Energy.	The multidisciplinary nature of strategic training indicates the nature of this field, which is considered of great importance in all specializations, as it combines theory, application, and common basic skills for developing human resources, and the necessity of keeping pace with renewed knowledge and adapting it in a way that is compatible with the essence of each specialization.	Research that relies on a multi-disciplinary group and gives great importance to the basic rules of strategic training and the most important strategic proposals that increase its effectiveness.	Further research on the basic rules and strategic plans that make strategic training more effective, then how to adapt it in accordance with each specialty so that it gives effective results in improving the capabilities and skills of human resources.

Table 5 briefly shows the strategic training trajectory in terms of its rules and development. This table highlights the dynamic and growing nature of the topic. The significant increase in scientific articles and international contributions, especially after 2019, indicates the increasing importance and dynamic characteristics of strategic training, especially between 2019 and 2020 and up to 2023. The participation of many countries, academic institutions and researchers underscores the diverse and multidisciplinary efforts. Strategic training is considered an extremely important field for various specializations, due to its common nature represented in general skills for developing human resources across different specializations, and on the other hand, its specificity that is linked to the essence of each specialization, as training is the practical translation of acquired knowledge. In the future, it is expected that there will be a greater focus on employing renewable knowledge, developing global partnerships, and adopting multidisciplinary research in order to increase the effectiveness of strategic training and enhance its positive impact on human resources. This is of great importance in charting better training paths and adapting it to future developments.

Conclusion

The bibliometric analysis conducted through this research provides a comprehensive and careful examination of strategic training in terms of its foundations and development. At the same time, this analysis confirms the occurrence of a major breakthrough in scientific research in this field, which is considered a fundamental focus in all specializations, and this

indicates the increasing importance of strategic training in developing and developing human resources skills. The global and interdisciplinary character of strategic training research is evident through the dominance of certain fields and keywords, in addition to the diversity of countries and institutions contributing to this research. International cooperation between scientists, academics and researchers from various disciplines has highlighted the current state of study and has provided an important basis for further research and studies. Continuous research is considered extremely important to form strategic training rules and curricula and improve the capabilities and skills of human resources, especially in light of the rapid cognitive and technological renewal that the world is witnessing day after day.

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