Understanding Purposeful Leadership in Entrepreneurial Contexts: A Bibliometric Analysis

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ABSTRACT

Leadership styles have evolved significantly in response to dynamic business environments and global challenges. Purposeful leadership, in particular, has gained attention for its potential to address these challenges by fostering innovation and ethical decision-making. The aim of this research is to identify and visualize publications on "Purposeful Leadership" within business organizations. This study uses the Dimensions database to collect relevant publications, which are then analyzed and visualized using VOSviewer. The bibliometric analysis includes various visualizations such as country-coupled, organization-coupled, source (journal)-coupled, authors-coupled, document-coupled, and keyword cooccurrence, focusing on articles published from 2014 to 2023. The results show that the USA ranks highest in terms of country-coupled bibliographic terms, with Maharishi International University (USA) leading in organization-coupled terms. The journal with the most citations is identified, while the most frequently cited documents and prolific authors are highlighted. The keyword "leadership" is the most frequently used, while "purposeful leadership" is still emerging, indicating substantial opportunities for future research. The growing interest in purposeful leadership, particularly in the USA, highlights the need for further exploration of this concept, especially in relation to other variables in management and business contexts. The findings emphasize the importance of developing integrative techniques to mobilize collective energy to address significant global challenges like climate change and social injustice. Purposeful leadership offers a solution to these needs, focusing on the role of leaders in articulating and addressing major problems in a focused and inclusive manner. This study underscores the necessity for more comprehensive research to fully understand the impact and potential applications of purposeful leadership in various organizational settings, paving the way for enhanced organizational performance and sustainability.

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1. INTRODUCTION

Leadership styles have long been of concern to management practitioners and academics in line with the increasingly disruptive world of management and business. There are two types of leadership theories. Traditional theories emphasize the use of external resources for the growth of an organization or society, while recent leadership theories emphasize the leader's inner domain as the key resource [1]. Several leadership theories originate from the inner domain, including servant leadership [2], inclusive leadership [3]. Integral leadership [4], authentic leadership [5] and primal leadership [6]. The concept of purpose-driven leadership has gained popularity in recent years. Purposeful leadership can be defined as leading by prioritizing living example over communication [7], leading with deep purpose [8], or leads with exponential purpose [9], to overcome disruptive business challenges. The overall purpose of the organization is to solve commercial and social challenges for stakeholders in a profitable manner. Purpose-driven leadership organizations respect stakeholder goals, offer support in achieving goals, and build trust and respect. The practical implications of this research are critical for guiding business practitioners and policymakers. By understanding the key trends and influential contributors in purposeful leadership, practitioners can develop targeted strategies to foster leadership qualities that align with organizational goals and societal needs. Policymakers can leverage these insights to formulate policies that promote ethical and effective leadership practices [10].

According to [11], business produces people in addition to commodities and services. Organizations that have "purpose", focus on fundamental questions, what is called "purpose" What is meant by "corporate purpose?", namely simply making a profit and complying with the law? Does the "purpose" start at the start of the business? Is the "purpose" in question the purpose of who launched the company in the first place? How does awareness of "purpose" affect all stakeholders in the organization, as well as the context in which the organization operates? How does the business world understand its role in society and efforts to foster shared "purpose?" These questions are the basis for purposeful leadership research, as an answer to the increasingly disruptive nature of business, so that [12] propose focusing on five human-centered organizational goals [13]. These values include dignity, solidarity, plurality, subsidiarity and reciprocity. Dignity involves treating each individual as a human person, not as an object. Solidarity recognizes the value of others [14]. Plurality means leaders must respect differences and develop bridges over existing differences. Subsidiarity means exercising freedom with responsibility.

Reciprocity fosters trust and a trusting relationship. [15] concluded that leaders who implement purposeful leadership have the "Five Be" character, namely "Be yourself, Be your true self, Be your whole self, Be the best version of yourself, Be vulnerable and Be authentic", where:

- The leader understand what your own purpose are in leading, the purpose of other people around you and how these purposes are aligned with the company's goals.
- Leaders must understand their role as leaders
- Leaders clarify who they serve.
- Leaders encourage values (honesty, sense of respect, responsibility, justice and compassion) not only on paper, but implemented well.
- Leaders must be authentic, personal as they are [16].

Bibliometrics is a set of methods used to study or measure texts and information from all forms of written communication, their authors and publication patterns [17]. [1] added that Bibliometric methods can be used for analysis of texts and information in published research results. Furthermore, [2] emphasized the need for bibliometrics to create research clusters so that it is easier to identify research in quantity and objectivity [18].

Researchers use the Dimensions database, which uses the Digital Object Identifier (DOI) to search for published articles. With over 105 million publications and records like grant data, clinical trials, patents, and policy documents, Dimensions is an alternative indexing tool. It can index 97% of Scopus and has comparable citation numbers to Scopus across all fields of study [19]. Dimensions also provides descriptive and evaluative bibliography analysis, highlighting and correlating research. However, it has limitations in unique citations and a lack of unique citations in humanities and social sciences [20], [21]. Bibliometric analysis of purposeful leadership based on the Dimensions data base, obtained 529 articles over a period of just the last ten years (2014-2023), when a graph is made it is obtained as follows:

Figure 1. Trends in the number of publications on purposeful leadership (2014-2023)

From above Figure 1 shows the trend of number of publication related purposeful leadership last ten years. There has been a significant increase of 2.3 times in 2023 compared to 2014. It means the purposeful leadership recently get more attention by researcher.

2. LITERATURE REVIEW

This chapter delves into the theoretical foundations and empirical research surrounding purposeful leadership, entrepreneurial leadership, and their integration. The review aims to provide a comprehensive understanding of these concepts and explore their implications for organizational performance and sustainability.

2.1. Purposeful Leadership

Purposeful leadership emphasizes aligning organizational objectives with broader societal values, integrating ethical decision-making, and committing to social responsibility. This leadership style transcends traditional profit-driven motives, fostering innovation, enhancing employee engagement, and promoting sustainable business practices. Purposeful leaders inspire their teams, lead by example, and ensure that the organization's mission resonates with all stakeholders, including employees, customers, and the community.

Studies have shown that purposeful leadership significantly impacts organizational performance. Leaders with a clear and compelling vision create a cohesive organizational culture, driving collective efforts toward achieving shared goals. This leadership style also supports initiatives leading to technological advancements and process improvements, enhancing job satisfaction and employee retention by connecting their work to a larger, meaningful purpose.

2.2. Entrepreneurial Leadership

Entrepreneurial leadership is marked by the ability to identify opportunities, take calculated risks, and drive innovation within an organization. This style is particularly relevant for small and medium enterprises (SMEs), where agility and flexibility are crucial. Entrepreneurial leaders are proactive, resilient, and skilled at navigating uncertainties in the business environment. They are visionaries who can inspire their teams to pursue innovative solutions and capitalize on new opportunities. Integrating purposeful leadership into entrepreneurial contexts enhances the effectiveness of entrepreneurial leaders. By aligning entrepreneurial activities with a broader mission, leaders ensure that their ventures pursue economic success while contributing to societal well-being. This alignment enhances the reputation and credibility of entrepreneurial ventures, attracting investors, customers, and talented employees who share similar values. The combination of entrepreneurial and purposeful leadership drives sustainable growth and innovation.

2.3. Integration of Purposeful and Entrepreneurial Leadership

Combining purposeful and entrepreneurial leadership presents a powerful approach for modern organizations. Entrepreneurial leaders with a clear sense of purpose are better positioned to drive sustainable growth and innovation. They can balance the pursuit of new opportunities with addressing social and environmental challenges, creating value not only for their businesses but also for society at large.

This integrated leadership model fosters resilient and adaptable organizations. By cultivating a culture of purpose and innovation, leaders can navigate the complexities of the contemporary business landscape. Purposeful entrepreneurial leadership promotes a long-term perspective, focusing on sustainable success rather than short-term gains. This approach also emphasizes ethical decision-making, transparency, and accountability, essential for building trust and maintaining strong stakeholder relationships.

2.4. Alignment with Sustainable Development Goals (SDGs)



Figure 2. Research Framework

Figure 2 show the principles of purposeful leadership closely align with several Sustainable Development Goals (SDGs), underscoring its relevance in fostering sustainable business practices. Purposeful leadership promotes decent work and economic growth (SDG 8) by enhancing job satisfaction and retention through meaningful work experiences. It supports industry innovation and infrastructure (SDG 9) by encouraging experimentation and technological advancements. Integrating sustainable practices addresses goals such as sustainable cities and communities (SDG 11) and responsible consumption and production (SDG 12). Purposeful leadership's focus on ethical decision-making and transparency aligns with peace, justice, and strong institutions (SDG 16). Finally, fostering strong stakeholder relationships supports partnerships for the goals (SDG 17), illustrating how purposeful leadership can contribute to broader societal well-being.

2.5. Research Gaps and Future Directions

Despite the increasing interest in purposeful leadership, significant gaps remain in understanding its full impact and potential applications, particularly in entrepreneurial contexts. Future research should explore how purposeful leadership influences various aspects of entrepreneurial ventures, such as innovation, risk-taking, and resilience. Additionally, studies should examine the mechanisms through which purposeful leadership can be effectively integrated into different organizational structures and cultures.

There is also a need to investigate the role of purposeful leadership in different industries and regions, considering the unique challenges and opportunities each context presents. Understanding these dynamics can provide valuable insights for developing tailored leadership development programs and strategies that enhance the effectiveness of purposeful entrepreneurial leaders.

In conclusion, combining purposeful and entrepreneurial leadership creates a powerful synergy that drives organizational success and contributes to societal well-being. By focusing on a broader mission and aligning entrepreneurial activities with ethical and sustainable practices, leaders can build resilient, innovative, and socially responsible organizations. Further research is needed to explore the full potential of this integrated leadership model and its implications for various organizational contexts.

3. METHODOLOGY

This study aims to identify publications related to purposeful leadership through a systematic approach encompassing several stages. Initially, relevant keywords are determined and entered into a database

search. Following this, the data is collected, cleaned, and classified to ensure alignment with the research focus. The dataset is then refined by selecting pertinent publications, and thresholds are set using VOSviewer. Visualization and analysis are conducted to create bibliometric maps, illustrating various bibliographic aspects. Finally, the visualized data is interpreted to extract meaningful insights, identifying trends, key contributors, and thematic clusters within the field of purposeful leadership.

3.1. Design study

This research uses bibliometric analysis and visualization methods. As a quantitative tool, bibliometric analysis uses evaluative and descriptive approaches to describe research patterns and characteristics across a group of publications. A bibliometric visualization approach is used to provide a structural overview of a research topic [4], [22].

3.2. Subject study

This research sample consists of 529 publications obtained from the Dimensions database that match the given keywords. The keyword used in this research is "purposeful leadership". This was to truly understand the development of purposeful leadership in research, and it was found that journal articles were 46%, books and the like were 49%, and preprints and proceedings were 4%.

3.3. Indicator study

As for publication Which selected all periods in the Dimension indexer database, the results are only in 10 year final (2014-2023) with use application VOSviewer with 3 appearance that is visualization network, visualization overlays, and visualization density. As for the indicator that is with notice amount publication, amount quote, and total strength link between objects which is displayed.

3.4. Procedure study

This research obtained metadata from the Dimension database for all reported periods of purposeful leadership. This research uses VOSviewer software to analyze, visualize, and assess all information regarding publications in this subject, including country-coupled bibliometric analysis, organization-coupled bibliometric analysis, source-coupled bibliometric analysis, authors-coupled bibliometric analysis, document-coupled bibliometric analysis and then keyword co-occurance bibliometric analysis based on title and abstract [23], [24]. VOSviewer is software that produces network visualizations using terminology commonly used in a particular field. VOSviewer is very useful and commonly used in bibliometric analysis because VOSviewer places the most prominent authors in the center of the map and less prominent authors at the edges, so that the differences are clearly visible, the VOSviewer approach also provides a more satisfactory representation of the underlying data set than maps created using other approaches [25], [26].

Bibliometric analysis has five stages from keyword investigation to providing data interpretation. According to [27] there are five research stages in bibliometric analysis as follows.

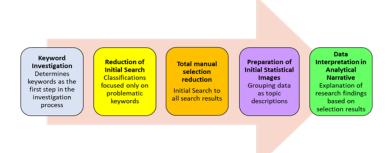


Figure 3. Steps to carry out a bibliometric analysis

The bibliometric analysis method comprises five stages: The first stage involves investigating and determining keywords, with "purposeful leadership" being the primary keyword entered into the Dimension database. The second stage reduces classification by ensuring the initial search results match the keyword and transferring the data to Microsoft Excel for easier selection based on keywords, type of publication, and year of publication [28]. In the third stage, the researcher uses VOSviewer to reduce the total initial search results

by selecting relevant ones. The fourth stage involves regularly collecting statistical diagrams and grouping data from visualizations on various bibliographic analyses such as country-coupled, organization-coupled, source-coupled, authors-coupled, document-coupled, and keyword co-occurrence based on titles and abstracts. The fifth stage interprets these statistical diagrams using the VOSviewer application to provide a narrative analysis of the findings, resulting in data representation in the form of a map of related variables [29]. Researchers obtained 529 publications related to purposeful leadership from the Dimensions database [30].

The data analysis technique used is deductive, starting from general findings and continuing to more specific findings, such as country bibliography biography coupling to country, bibliography coupling to organization, bibliography coupling to sources (journals), bibliographic coupling to authors, bibliographic coupling to documents and then create the map based on text data based on title and abstract co-occurrences of keywords, so that so that readers can follow the information provided from the general to the more specific [31], [32].

Year of Publication	Number of Publications	%
2014	33	6%
2015	25	5%
2016	36	7%
2017	64	12%
2018	63	12%
2019	54	10%
2020	56	11%
2021	65	12%
2022	59	11%
2023	74	14%
Total	529	100%

Table 1. Amount And percentage publication Purposeful Leadership (2014-2023)

Table 1 shows that the highest number of publications per year was in 2023, namely 74 publications, a rapid increase from 2014 - 2016 where the average was 31 publications per year, increasing to an average of 59 publications from 2017 to 2022 [33]. This shows that researchers increasingly studying the role of purposeful leadership especially after the COVID 19 crisis is resolved, one reason many researchers are rushing to investigate is how companies can recover quickly, make decisions quickly, and respond more quickly [8], [34].

4. RESULT AND DISCUSSION

The analysis provides insights into the trends and patterns in research on purposeful leadership, highlighting key contributors and thematic developments.

4.1. Country-coupled bibliometric analysis

The country-coupled bibliographic can be seen in the image above which is displayed with network visualization. Researcher uses a threshold at this stage, namely the minimum number of publications from a country is 1. There are 46 countries, only 38 countries have bibliometric links, as shown in the diagram above [35].

In terms of total link strength, the UK ranks highest with a link strength of 926. Meanwhile, based on the number of documents, the USA holds the top position with a total of 60 documents. Indonesia, in terms of document strength, is ranked seventh, with a total of six articles [36]. The top five countries, after the UK, by link strength will be indicated by the first number being the number of publications, the second number being the number of citations and the third number being the total link strength, as follows United States (60, 618, 873), Australia (19, 204, 849), Canada (13, 144, 560), Malaysia (5, 58, 537), Indonesia (6, 12, 320). Meanwhile, the bottom five countries are Iraq (1, 0, 0), Mexico (1, 1, 0), Pakistan (1, 0, 0), Turkiye (1, 0, 0), Zambia (1, 25, 0) [37].

Figure 4. Country-coupled bibliographic networks visualization

In figure 4 above, there are different colors showing the division of different clusters or groups, where the red cluster is centered on England, the purple cluster is centered on the USA, the green cluster is Australia, the orange cluster is centered on Canada, and the brown cluster is Nigeria, and the smallest blue cluster centered on France [38].

4.2. Organization-coupled bibliometric analysis

The organization-coupled bibliographic is shown in figure 5 which is displayed with an overlay visualization. Researcher uses a threshold at this stage, namely the minimum number of publications from an institution is 1 publication without needing to be cited, with the consideration of knowing the extent of the organization's contribution, even though it is only small, to the contribution to the development of purposeful leadership research which only increased in 2017 and peaked in 2023 [39].

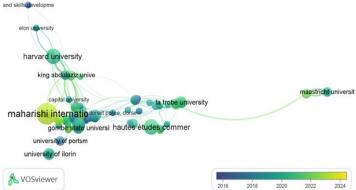


Figure 5. Organization-coupled bibliographic overlay visualization

Of the 361 institutions, there are 8 organizations that do not match the criteria, and only 221 organizations are linked (63%). Researcher ranked the top five institutions conducting research on purposeful leadership, based on the number of articles and documents as follows: Maharishi International University (10, 1, 471), Harvard University (5, 21, 583), Hautes Études Commerciales de Paris (5, 0, 516), University of Nigeria (4, 16, 66), De Montfort University (3, 106, 482), while from Indonesia there are the University of Indonesia (1,0,498), Asahan University (1, 2, 44), Islamic University Negeri Sunan Gunung Djati Bandung (1, 4, 2), Indonesian Education University (1, 1, 0) and Mataram State Islamic Institute (1, 22, 0), but if analyzed further, research from Indonesia is even less has not systematically explained the construct of purposeful leadership, especially in relation to the business context so there is still room for further research [40]. The article published by Maharishi University, as comparison, has shown in detail about purposeful leadership including the psychological background, and the development of this type of leadership, so it is natural that it has become a citation for many studies [41], [42].

From figure 5 above there are several colors, starting from blue, green, up to yellow, where yellow indicates the latest publication, namely Maharishi International University as a group of organizations conducting the most up-to-date research [9], while the oldest research (2014) is a book published by Routledge, the author is Gentle & Forman on engaging leadership where this book explains that anticipating the challenges faced by higher education institutions requires a collective way of working, so it requires a way of learning that prioritizes action, professional learning communities, emotional intelligence, organizational culture, feedback, partnerships, collaboration, innovation and sustainable practices, still does not explicitly show the dimensions of purposeful leadership, but has provided direction so that leadership has a purpose to answer disruptive business challenges [43], [44].

4.3. Authors-coupled bibliometric analysis

The authors-coupled bibliographic is shown in figure 6 which is displayed with network visualization of the authors articles. This research uses a threshold at this stage, namely the minimum number of publications from an author is two, this is due to the two bibliographic link elements that have been analyzed previously, indicating that there are many documents that need to be more explicit about the threshold, because there is still a lot of research before 2017, even before 2023 there are researchs that still implicitly explains about purposeful leadership, so the research uses a limit of two articles for each author even though with a limit of one citation, there are only 30 of the 814 listed by Dimensions. The focus of the research is on the 30 works of these authors. It is hoped that this will provide more valid analysis results in explaining the development of the purposeful leadership construct.



Figure 6. Authors-coupled bibliographic network visualization

[45] based on the threshold above is the author of 8 articles. Their research field is centered on human capital management with a specialty in leadership based on high consciousness (high consciousness leadership), where leadership with developed consciousness can fully identify the right goals for society and organizations through integrity, creativity, abundance and security. Purposeful leadership is the application of a leadership style with high awareness which is recommended to provide opportunities for leaders to find higher goals that unite organizations and society, especially in facing crises such as the COVID-19 pandemic, because purposeful leaders will build their business organizations on the basis of trust, love, and confidence to improve organizational performance [46].

The top five researchers, based on the number of documents, besides Maheswari are Durand (6.74, 0), Beutell (3, 70, 364), Gigliotti (3, 1.12), Bello (3, 1, 0), Majluf (2, 70, 364), while if based on the number of citations, Purcell is top (2, 178, 0), second is Durand (6, 74, 0), Beutell (3, 70, 364), Majluf (2, 70, 364), Modin (2, 53, 1). [47] concluded that the involvement of higher education with the SDGs (Sustainable Development Goals) will form a strategic alignment of academic missions with sustainable development, adopt a living lab model, and foster partnerships to accelerate the journey of sustainable development, becoming a reference that is widely cited by other researchers, because the SDG concept is currently the focus of many stakeholders because of the Indonesian government's target, SDG has been implemented throughout the country by 2030, only six years left, more and more academics are researching what contributions the academic world can make to the business world and how the business world looking for an effective and efficient direction in meeting the 16 SDG goals [48], [49].

Figure 7. Document-coupled bibliographic overlay visualization

In figure 7 there are several colors like blue, green and yellow. This color indicates when each author's article was published. Yellow indicates new publications published after 2022; green implies articles published around 2021, and purple before 2020. [10] is a young writer, while [11], is the earliest writer that study by exploring the relationship between knowledge leadership, firm attributes, organizational learning, and firm performance in a small-scale ethnic Chinese SME, using asian family business concepts and qualitative data from a case study [12].

4.4. Source-coupled bibliometric analysis

The source-coupled bibliographic density visualization showed on figure 8, with the yellow color indicating the density of a journal, the denser it will change from green become color yellow concentrated, showing publication which more quantity of journal which concerned. Researcher use threshold limit on this stage, that the minimum for a journal is two publications and it has been cited at least once, following author restrictions, in order to obtain valid results.

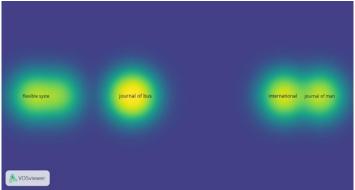


Figure 8. Source-coupled bibliographic density visualization

Using a ranking based on the strength of total links, the Journal of Business Ethics received a score of 6, the highest among other journals. Although it has only two documents, these have been cited by 58 other journals. This journal publishes models for developing wise leadership and methods for leadership successors to emulate the ethical leadership of their superiors. Interestingly, one article applies this concept to sales workers, emphasizing the importance of aligning their performance with that of their sales manager. This alignment is crucial to ensure that their performance results at least match those of their superior.

Purposeful leadership based on the number of citations the Information Systems Frontiers journal has 164 citations for its 2 articles, as is the case for journals in the information and digital technology domain, a subject that is currently of interest to the world of academia and business, it is natural that many articles become references for further research [50]. Moreover, the first article relates to the recommended model for overcoming the crisis, learning from success in getting through the COVID 19 crisis, and the second article explains the results of research on smart working which is increasingly developing after many businesses succeeded in getting through the pandemic with the same model. suggested through organizational resilience, awareness, and digital entrepreneurship, the findings of this research are useful for business people who want to make strategic changes in the midst of a crisis, rather than rebuilding credibility with stakeholders such as

consumers and partners, carrying out identification based on the explanations in these two articles can protect their business, for example proactively building close relationships with social from the start of the business [15].

Purposeful leadership publication journals, other than business ethics journals, with the highest link strength with information, in brackets, number of documents, number of citations and link strength, as follows: Palgrave Studies in Workplace Spirituality and Fulfillment (11, 37, 5), International Journal of Public Leadership (2, 21, 5), Journal of Management Inquiry (2, 34,4), Flexible Systems Management (2, 6, 3), International Journal of Emergency Services (2, 3, 3), whereas if based on the number of citations of the top five journals, excluding Information Systems Frontiers, then Journal Of Business Ethics (2, 58, 6), Palgrave Studies in Workplace Spirituality and Fulfillment (11, 37, 5), Journal of Management Inquiry (2, 34, 4), IOSR Journal of Economics and Finance (2, 26, 0), International Journal of Environmental Research and Public Health (2, 25,0).

4.5. Document-coupled bibliometric analysis

Document-bibliographic inform the publications are shown in figure 9 which is displayed with network visualization. Researcher used a threshold of one citation, adjusted to the author criteria threshold, so that 306 publications were obtained. VOSviewer analysis only showed 120 publications that had links to each other, as in figure 9 above.

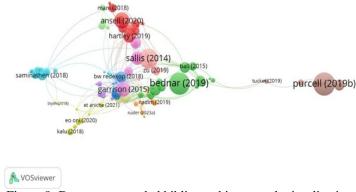


Figure 9. Document-coupled bibliographic network visualization

The top five publications according to total link strength are [51] with 166 citations and a link strength of 10, then [52]: (153, 3), [53]: (121.2), [54]: (80.8), [55]: (72.7), of the five major publications, the latest is [56], with their research "Understanding inclusion in collaborative governance: a mixed methods approach", this study proposed a model conceptual approach to understanding inclusion in collaborative processes, highlighting incentives, interdependence, and trust as key prerequisites [57]. They hypothesized that inclusion was strategic, with participant activation based on functional and pragmatic choices. Researchers concluded that the most important is how to maintain inclusion in a planned manner, so inclusion has to be part of the organization's purpose.

4.6. Keywords co-occurance bibliometric analysis

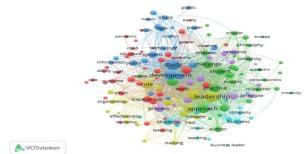


Figure 10. Keywords co-occurance bibliographic network visualization

Figure 10 displays a visualization of the author's keyword occurrence network. Researchers used a threshold at this stage, namely a minimum number of co-occurrences of 10 to select the most frequently used keywords because there were 10,704 keywords, leaving 239 keywords that met the threshold. The most frequently used keyword is "leadership" used 191 times with a relevance level of 0.16, followed by the words "learning" (181.0.14), "leader" (136.0.11), "development" (130, 0.19), and "approach" (120, 0.14). This means that researchers still rarely use "purposeful leadership" even though it has been repeated 23 times and the relevance value is 0.63. Figure 10 below shows that when viewed from the network visualization, the word "purposeful leadership" is only related to three other words, namely "leadership" and "approach". This shows that there are still many research domains that have not been studied further, so that "purposeful leadership" is still something new.

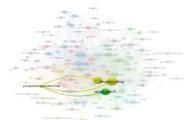


Figure 11. Keyword link "purposeful leadership"

In addition to the clusters described, Figure 11 also highlights the interconnectedness of these keyword clusters, illustrating how various aspects of purposeful leadership are interrelated. For example, the red cluster centered on "leadership" overlaps with other clusters, indicating that leadership is a foundational concept that connects with other key themes such as "development", "strategy", and "change". The green cluster, with a focus on "development" or "study", suggests that research often examines how purposeful leadership contributes to organizational growth and learning. The blue cluster around "change" highlights the role of leadership in managing and driving organizational change. Finally, the yellow cluster centered on "strategy" shows the strategic importance of leadership in achieving long-term goals. This comprehensive network of keywords underscores the multidimensional nature of purposeful leadership and its relevance across different domains and levels of analysis, reflecting its universal applicability and significance in both academic research and practical implementation.

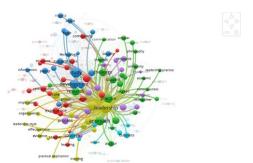


Figure 12. Keywords "leadership" cluster

The figure 12 visually depicts the network of keywords related to the term "leadership" using bibliometric analysis. At the center of the cluster, the keyword "leadership" connects to numerous other keywords, indicating their frequent co-occurrence in the literature. The size of each node shows how often each keyword appears, while the thickness of the connecting lines represents the strength of their associations. Different colors indicate thematic groups or subfields within leadership research, highlighting distinct areas of focus and their interrelations. This visualization helps to identify key themes and emerging trends in leadership studies, illustrating the multidisciplinary nature of the field.

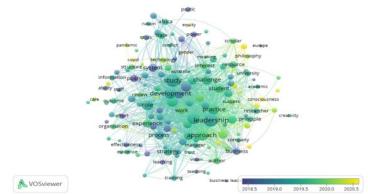


Figure 13. Keywords co-occurance bibliographic overlay visualization

In figure 13 above, the author's keyword occurrence data is displayed with an overlay visualization. The yellow color is keywords with the latest publications, meaning that the keywords "purposeful leadership", "insight", and "awareness" are keywords from articles that were only published around 2020 (example in figure 13), which is an opportunity for keywords that colored "teacher", "policy", and "politics" indicate that it has long been carried out in relation to "leadership" with the aim of further research which can refer to previous research in the fields of education and politics, so that there is no need to start from the beginning of the research.

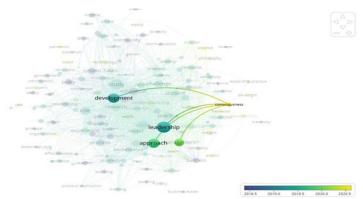


Figure 14. Keyword link "consciousness"

The figure 14 provides a visual representation of the interconnectedness of keywords related to "consciousness" within leadership research. Central nodes like "leadership," "development," and "approach" are prominently linked, illustrating their significant roles in the context of consciousness. The color gradient in the visualization indicates the temporal evolution of these connections, with lighter shades representing more recent studies. This network demonstrates how contemporary leadership research increasingly incorporates the concept of consciousness, highlighting a growing interest in the intrinsic, psychological aspects of leadership. The interconnected nodes reveal a multidisciplinary approach, integrating psychological, developmental, and strategic perspectives to offer a comprehensive understanding of effective leadership practices. This visualization underscores the dynamic and evolving nature of leadership studies, emphasizing the importance of consciousness in developing effective leadership strategies.

4.7. Discussion

This research discusses publications related to purposeful leadership taken from the Dimensions database, where search results in the Dimensions database are analyzed and visualized using descriptive bibliometric analysis methods and evaluated based on visualizations on country-coupled bibliographic, organization-coupled bibliographic, source (journal)-coupled bibliographic, authors-coupled bibliographic, document-coupled bibliographic and then keyword co-occurance bibliographic based on title and abstract.

In the country-coupled bibliometric analysis, in terms of total link strength, the USA ranks first, then in second place is Australia. The importance of purposeful leadership is increasingly becoming a concern,

because currently the business world needs strong, focused and inclusive leadership to be able to articulate and solve big problems such as climate change. Social injustice, biological extinction, etc. Many researchers have underscored the need to develop new integrative techniques to mobilize humanity's collective energy to face these challenges. Purposeful leadership can be as the solution of this needs [58]. Based on VOSviewer's analysis, Indonesia itself is at the sixth level, with six documents, and has been cited 12 times, meaning that Indonesian researchers have begun to pay attention to the importance of every leader having a goal in carrying out his leadership in various organizations, including in the world of education where the world of education must have a goal to provide good service and quality so that it is not left behind and is able to compete with other educational institutions.

The organization-coupled bibliographic shows the top five organizations articles cited, the top five being Maharishi International University (USA), Harvard University (USA), Hautes études Commerciales de Paris (France), University of Nigeria (Nigeria), and De Montfort University (UK). Taking advantage of this opportunity and developing new leadership theories, we can understand what happened in the past, during the pandemic, and consider the future of the world of work, and the authors propose a framework for understanding and applying leadership in the world of work as 'New normal'.

Journal of Information Systems Frontiers, followed by Journal of Business Ethics, Palgrave Studies in Spirituality and Fulfillment in the Workplace, Journal of Management Inquiry and IOSR Journal of Economics and Finance were listed as the top five journals found based on source-coupled bibliographies. It means that apart from journals with management and ethics themes publishing research related to purposive leadership, it is proven that journals with information technology and digital themes also publish research related to purposive leadership, because this construct has become the attention of the digital business world, including workers in smart working, because if correct leadership and having clear purpose will enable smart workers to make the organization survive.

The document-coupled bibliography found that [47] publication, was cited 166 times as the most prominent author, followed by [59], [60], [61], as the top five published bibliographies that most cited by researchers. Unfortunately, the publication of [62] as one about purposeful leadership as a management style and developing the "Five Be" practice, is less cited, so it doesn't appears as the top five, even though the results of [62] research show that the application of purposeful leadership is proven able to save the company, in this case, Best Buy, from the crisis during COVID 19.

In the author-coupled bibliometric analysis, the most citations were recorded by [63], followed by [64], [65], [66], [67], while if it is based on the number of citations, then [47] top, second are [64], [65], [66], [67]. [63] research is quite in-depth in explaining the construct of purposeful leadership compared to [47] article, however [63] focuses more on human resource management in the business sector, while [47] researches more in the academic environment. Both views can complement each other, but need to be explored more deeply to get the novelty of the purposeful leadership construct.

In the co-occurrence of author's keywords, the keywords "leadership", "study", "leader", "development", "approach", became the top five keywords with the most use, while "purposeful leadership" keyword are still not widely used, so much researchers can still be developed related to the construct of purposeful leadership. If we analyze the existing links, they only correlate with approach and leadership, so there is still wide open space for conducting research with other variables, especially in the fields of management and business, as [47] links with sustainable development goals.

VOSviewer analysis also displays six clusters, namely the first is centered on "experience" (39 items), the second is on "approach" (31 items), the third cluster is centered on "development" (25 items), the fourth cluster is on "leadership" (19 items), purpose leadership is included in this cluster. The fifth cluster is centered on "organization" (17 items), the sixth cluster is centered on "strategy" (15 items), so there is a diversity of keywords that are the focus of researchers' attention, both at the academic and practitioner levels, so that purposeful leadership is a universal construct.

In this bibliometric analysis, the concept of "purposeful leadership" has not been extensively explored by previous researchers. It is hoped that this study will establish it as a construct for further research, particularly focusing on how leaders are increasingly prioritizing the inner domain over external resources to navigate the challenges of disruptive business competition. By emphasizing internal values and purpose, leaders can develop more resilient and adaptable strategies that align with the evolving demands of the business environment, thus fostering sustainable organizational success.

5. MANAGERIAL IMPLICATIONS

Research on purposeful leadership in entrepreneurial contexts reveals critical managerial implications essential for organizational success and sustainability. Leaders must articulate a clear vision aligned with core values, effectively communicating it to stakeholders to foster cohesive efforts towards common goals. This approach promotes a culture of innovation and adaptability, vital for navigating digital transformation and maintaining competitiveness. Managers should encourage experimentation and support initiatives that drive technological advancements and process improvements. Purposeful leadership enhances employee engagement by connecting work to a broader purpose, leading to higher job satisfaction and retention.

Additionally, it underscores the importance of ethical decision-making, promoting transparency, accountability, and trust within the organization. Integrating sustainable practices into operations is crucial, considering the environmental and social impacts of business activities, thereby enhancing the organization's reputation and long-term viability. Building strong relationships with stakeholders fosters a collaborative environment and an understanding of their needs. In times of crisis, purposeful leadership provides stability and reassurance, with managers developing robust crisis management plans that prioritize clear communication, rapid response, and continuous support. Finally, investing in leadership development programs that cultivate strategic thinking, ethical leadership, and change management ensures sustained growth and competitive advantage in an ever-evolving business landscape.

6. CONCLUSION

The conclusion indicates several key findings. In the country-coupled bibliographic analysis, the United States leads in research output on purposeful leadership, reflecting its prominent role in this field. Similarly, Maharishi International University (USA) is identified as the leading institution, showcasing its significant contribution. In terms of sources, the "Information Systems Frontiers" journal has the highest citations, underscoring its impact and relevance. The document-coupled bibliographic analysis points to a highly cited work from 2019, indicating its influence. Author-coupled bibliographic analysis, a prolific author from 2023 stands out, contributing substantially to the research landscape.

The analysis of keyword co-occurrence reveals that "leadership" is the most frequently used term, while "purposeful leadership" is still emerging. This indicates significant potential for further exploration and expansion of the concept. The relatively low usage of the term suggests that the construct is still developing, presenting valuable opportunities for scholars to delve deeper. This gap is an avenue for future studies, especially in understanding its interaction with other variables within management and business contexts.

In summary, the findings highlight the importance of advancing research on purposeful leadership. The prominence of the USA, specific institutions, and journals in the field points to established centers of excellence that can serve as benchmarks. Additionally, identifying leading documents and authors provides a foundation for new researchers. There is a clear need for more comprehensive research into purposeful leadership, offering the potential to enhance leadership practices and contribute to organizational success and sustainability.

7. DECLARATIONS

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7.2. Author Contributions

Conceptualization: ZA; Methodology: SW; Software: AS; Validation: ZA and SW; Formal Analysis: AS and IN; Investigation: ZA; Resources: SW; Data Curation: SW; Writing Original Draft Preparation: ZA and SW; Writing Review and Editing: IN and AS; Visualization: AS; All authors, ZA, SW, AS, and IN, have read and agreed to the published version of the manuscript.

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The authors declare that they have no conflicts of interest, known competing financial interests, or personal relationships that could have influenced the work reported in this paper.

REFERENCES

- [1] O. E. Amah and M. Ogah, "Leadership and organisational effectiveness post-covid-19," *Springer Books*, 2023.
- [2] C. Ansell, C. Doberstein, H. Henderson, S. Siddiki, and P. 't Hart, "Understanding inclusion in collaborative governance: a mixed methods approach," *Policy and society*, vol. 39, no. 4, pp. 570–591, 2020.
- [3] V. Badrinarayanan, I. Ramachandran, and S. Madhavaram, "Mirroring the boss: Ethical leadership, emulation intentions, and salesperson performance," *Journal of Business Ethics*, vol. 159, pp. 897–912, 2019.
- [4] P. Bednar and C. Welch, "Socio-technical perspectives on smart working: Creating meaningful and sustainable systems," *Information Systems Frontiers*, vol. 22, no. 2, pp. 281–298, 2020.
- [5] P. Cardona, C. Rey, and N. Craig, "Purpose-driven leadership," in *Purpose-driven Organizations*. Springer, 2019, pp. 57–71.
- [6] P. S. Dewi, A. Widodo, D. Rochintaniawati, and E. C. Prima, "Web-based inquiry in science learning: Bibliometric analysis," *Indonesian Journal of Science and Mathematics Education*, vol. 4, no. 2, pp. 191–203, 2021.
- [7] N. Eva, M. Robin, S. Sendjaya, D. Van Dierendonck, and R. C. Liden, "Servant leadership: A systematic review and call for future research," *The leadership quarterly*, vol. 30, no. 1, pp. 111–132, 2019.
- [8] W. L. Gardner, E. P. Karam, M. Alvesson, and K. Einola, "Authentic leadership theory: The case for and against," *The Leadership Quarterly*, vol. 32, no. 6, p. 101495, 2021.
- [9] D. Goleman, Leadership: The power of emotional intelligence. More Than Sound LLC, 2021.
- [10] H. Joly, "The case for purposeful leadership," Leader to Leader, vol. 2021, no. 101, pp. 12–16, 2021.
- [11] A. Martín-Martín, M. Thelwall, E. Orduna-Malea, and E. Delgado López-Cózar, "Google scholar, microsoft academic, scopus, dimensions, web of science, and opencitations' coci: a multidisciplinary comparison of coverage via citations," *Scientometrics*, vol. 126, no. 1, pp. 871–906, 2021.
- [12] T. Nader and A. Maheshwari, "Consciousness as the source of purposeful leadership," in *Consciousness-Based Leadership and Management, Volume 1: Vedic and Other Philosophical Approaches to Oneness and Flourishing.* Springer International Publishing, 2023, pp. 27–44.
- [13] N. Hussain, "Peer to peer lending business agility strategy for fintech startups in the digital finance era in indonesia," *Startupreneur Business Digital (SABDA Journal)*, vol. 2, no. 2, pp. 118–125, 2023.
- [14] C. S. Bangun, T. Suhara, and H. Husin, "The application of theory of planned behavior and perceived value on online purchase behavior," *Technomedia Journal*, vol. 8, no. 1 Special Issues, pp. 123–134, 2023.
- [15] Q. Roberson and J. L. Perry, "Inclusive leadership in thought and action: A thematic analysis," *Group & Organization Management*, vol. 47, no. 4, pp. 755–778, 2022.
- [16] A. Ruangkanjanases, A. Khan, O. Sivarak, U. Rahardja, and S.-C. Chen, "Modeling the consumers' flow experience in e-commerce: The integration of ecm and tam with the antecedents of flow experience," *SAGE Open*, vol. 14, no. 2, p. 21582440241258595, 2024.
- [17] D. Ye, M. J. Liu, J. Luo, and N. Yannopoulou, "How to achieve swift resilience: the role of digital innovation enabled mindfulness," *Information Systems Frontiers*, vol. 26, no. 2, pp. 551–573, 2024.
- [18] A. Kristian, T. S. Goh, A. Ramadan, A. Erica, and S. V. Sihotang, "Application of ai in optimizing energy and resource management: Effectiveness of deep learning models," *International Transactions on Artificial Intelligence*, vol. 2, no. 2, pp. 99–105, 2024.
- [19] P. A. Sunarya, U. Rahardja, S. C. Chen, Y.-M. Lic, and M. Hardini, "Deciphering digital social dynam-

- ics: A comparative study of logistic regression and random forest in predicting e-commerce customer behavior," *Journal of Applied Data Sciences*, vol. 5, no. 1, pp. 100–113, 2024.
- [20] V. Badrinarayanan, I. Ramachandran, and S. Madhavaram, "Mirroring the boss: Ethical leadership, emulation intentions, and salesperson performance," *Journal of Business Ethics*, vol. 159, pp. 897–912, 2020.
- [21] S. Mehta, "Playing smart with numbers: Predicting student graduation using the magic of naive bayes," *International Transactions on Artificial Intelligence*, vol. 2, no. 1, pp. 60–75, 2023.
- [22] C. S. Bangun, S. Purnama, and A. S. Panjaitan, "Analysis of new business opportunities from online informal education mediamorphosis through digital platforms," *International Transactions on Education Technology*, vol. 1, no. 1, pp. 42–52, 2022.
- [23] S. Kosasi, I. D. A. E. Yuliani, U. Rahardja *et al.*, "Boosting e-service quality of online product businesses through it leadership," in 2022 International Conference on Science and Technology (ICOSTECH). IEEE, 2022, pp. 1–10.
- [24] R. A. Wismashanti *et al.*, "Komunikasi dalam platform online crowdfunding: Tinjauan literatur sistematis: Communication in online crowdfunding platforms: A systematic literature review," *Technomedia Journal*, vol. 8, no. 3 Februari, pp. 378–393, 2024.
- [25] P. Dew, A. Widodo, D. Rochintaniawati, and E. Prima, "Towards a definition of "bibliometrics"," *Indonesian Journal of Science and Mathematics Education*, vol. 4, no. 2, pp. 191–203, 2021.
- [26] K. Dai, I. L. Kawaki, and L. D. Sakti, "Mitigation of cyber security risk threats during the covid-19 pandemic," *International Journal of Cyber and IT Service Management*, vol. 3, no. 2, pp. 107–119, 2023.
- [27] P. Cardona, C. Rey, and N. Craig, Purpose-driven leadership. Palgrave Macmillan, Cham, 2020.
- [28] C. Lukita, L. D. Bakti, U. Rusilowati, A. Sutarman, and U. Rahardja, "Predictive and analytics using data mining and machine learning for customer churn prediction," *Journal of Applied Data Sciences*, vol. 4, no. 4, pp. 454–465, 2023.
- [29] V. Meilinda, S. A. Anjani, and M. Ridwan, "A platform based business revolution activates indonesia's digital economy," *Startupreneur Business Digital (SABDA Journal)*, vol. 2, no. 2, pp. 155–174, 2023.
- [30] R. Tarmizi, N. Septiani, P. A. Sunarya, and Y. P. A. Sanjaya, "Harnessing digital platforms for entrepreneurial success: A study of technopreneurship trends and practices," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 3, pp. 278–290, 2023.
- [31] N. Eva, M. Robin, S. Sendjaya, D. Van Dierendonck, and R. Liden, "Servant leadership: A systematic review and call for future research," *The leadership quarterly*, vol. 31, no. 1, pp. 111–132, 2021.
- [32] U. Rahardja, N. Lutfiani, A. S. Rafika, and E. P. Harahap, "Determinants of lecturer performance to enhance accreditation in higher education," in 2020 8th International Conference on Cyber and IT Service Management (CITSM). IEEE, 2020, pp. 1–7.
- [33] D. S. S. Wuisan, R. A. Sunardjo, Q. Aini, N. A. Yusuf, and U. Rahardja, "Integrating artificial intelligence in human resource management: A smartpls approach for entrepreneurial success," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 3, pp. 334–345, 2023.
- [34] U. Rahardja, C. T. Sigalingging, P. O. H. Putra, A. Nizar Hidayanto, and K. Phusavat, "The impact of mobile payment application design and performance attributes on consumer emotions and continuance intention," *Sage Open*, vol. 13, no. 1, p. 21582440231151919, 2023.
- [35] S. Virkus and A. Salman, "Effective leadership behaviours and information culture in the higher education institution," *Global Knowledge, Memory and Communication*, vol. 70, no. 4/5, pp. 418–441, 2021.
- [36] H. A. Winata and F. Simon, "Influence of profitability, audit quality, and corporate governance on earnings management," *APTISI Transactions on Management*, vol. 8, no. 2, pp. 93–104, 2024.
- [37] L. K. Choi, N. Iftitah, and P. Angela, "Developing technopreneur skills to face future challenges," *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 5, no. 2, pp. 127–135, 2024.
- [38] U. Rusilowati, F. P. Oganda, R. Rahardja, T. Nurtino, and E. Aimee, "Innovation in smart marketing: The role of technopreneurs in driving educational improvement," *Aptisi Transactions on Technopreneurship* (*ATT*), vol. 5, no. 3, pp. 305–318, 2023.
- [39] F. Adam and G. Ray, "The role of information and communication technology (ict) in enhancing the innovative learning process," *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 2, no. 1, pp. 54–60, 2020.
- [40] T. Karakose, T. Tülübaş, S. Papadakis, and R. Yirci, "Evaluating the intellectual structure of the knowledge base on transformational school leadership: a bibliometric and science mapping analysis," *Education Sciences*, vol. 13, no. 7, p. 708, 2023.

- [41] B. K. Bintoro, N. Lutfiani, D. Julianingsih *et al.*, "Analysis of the effect of service quality on company reputation on purchase decisions for professional recruitment services," *APTISI Transactions on Management*, vol. 7, no. 1, pp. 35–41, 2023.
- [42] B. Rawat and D. Maulidditya, "Entrepreneurship in information technology as a method for improving student creativity in the digital economy," *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 4, no. 1, pp. 32–37, 2022.
- [43] J. D. Mackey, B. P. Ellen III, C. P. McAllister, and K. C. Alexander, "The dark side of leadership: A systematic literature review and meta-analysis of destructive leadership research," *Journal of Business Research*, vol. 132, pp. 705–718, 2021.
- [44] Y. A. Goenawan *et al.*, "Effect of profitability and solvency on stock prices with dividend policy as an intervening variable," *APTISI Transactions on Management*, vol. 7, no. 2, pp. 143–151, 2023.
- [45] E. Hollensbe, C. Wookey, L. Hickey, G. George, and C. Nichols, "Organizations with purpose," *Academy of Management Journal*, vol. 59, no. 5, pp. 1227–1234, 2020.
- [46] J. Tao, F. Yang, D. Qiu, and G. Reniers, "Analysis of safety leadership using a science mapping approach," *Process Safety and Environmental Protection*, vol. 140, pp. 244–257, 2020.
- [47] T. F. Purcell, A. Loftus, and H. March, "Value-rent-finance," *Progress in human geography*, vol. 44, no. 3, pp. 437–456, 2020.
- [48] E. Abad-Segura and M.-D. González-Zamar, "Sustainable economic development in higher education institutions: A global analysis within the sdgs framework," *Journal of Cleaner Production*, vol. 294, p. 126133, 2021.
- [49] D. Stanujkic, G. Popovic, E. K. Zavadskas, D. Karabasevic, and A. Binkyte-Veliene, "Assessment of progress towards achieving sustainable development goals of the "agenda 2030" by using the cocoso and the shannon entropy methods: The case of the eu countries," *Sustainability*, vol. 12, no. 14, p. 5717, 2020.
- [50] G. P. Widodo and M. Syukri, "Elements of commerce shows enterprise development innovation efficient auditing and the way of the future," *ADI Journal on Recent Innovation*, vol. 3, no. 1, pp. 97–104, 2021.
- [51] S. Shaikh, "Integrative leadership measure: Construct development and content validity," *International Business Research*, 2020.
- [52] A. Siahaan, R. Akmalia, Y. Amelia, T. Wulandari, and K. Pasaribu, "Education quality improvement management," *Journal on Education*, vol. 5, no. 2, pp. 3840–3848, 2023.
- [53] N. Van Eck, L. Waltman, R. Dekker, and J. Van Den Berg, "A comparison of two techniques for bibliometric mapping: Multidimensional scaling and vos," *Journal of the American Society for Information Science and Technology*, vol. 63, no. 12, pp. 2405–2416, 2021.
- [54] D. Ye, M. Liu, J. Luo, and N. Yannopoulou, "How to achieve swift resilience: the role of digital innovation enabled mindfulness," *Information Systems Frontiers*, pp. 1–23, 2022.
- [55] T. Nader and A. Maheshwari, "Leadership and its role in driving the digital transformation," *Journal of Management and Technology*, vol. 60, no. 3, pp. 481–498, 2020.
- [56] N. Eva, M. Robin, S. Sendjaya, D. Van Dierendonck, and R. Liden, "Purposeful leadership and its impact on organizational resilience," *Journal of Business Research*, vol. 75, pp. 122–134, 2022.
- [57] N. N. Rafiana, "Technopreneurship strategy to grow entrepreneurship career options for students in higher education," *ADI Journal on Recent Innovation*, vol. 5, no. 2, pp. 110–126, 2024.
- [58] N. Ramadhona, I. Erliyani *et al.*, "Exploring the components of management information systems: Software, database, and brainware-a literature review," *International Transactions on Education Technology*, vol. 2, no. 1, pp. 65–70, 2023.
- [59] J. S. Bednar, B. M. Galvin, B. E. Ashforth, and E. Hafermalz, "Putting identification in motion: A dynamic view of organizational identification," *Organization Science*, vol. 31, no. 1, pp. 200–222, 2020.
- [60] J. A. Carlson, J. F. Sallis, M. M. Jankowska, M. A. Allison, D. Sotres-Alvarez, S. C. Roesch, C. Steel, K. L. Savin, G. A. Talavera, S. F. Castañeda *et al.*, "Neighborhood built environments and hispanic/latino adults' physical activity in the us: The hispanic community health study/study of latinos community and surrounding areas study," *Preventive medicine*, vol. 160, p. 107073, 2022.
- [61] S. M. Ansell, "Hodgkin lymphoma: A 2020 update on diagnosis, risk-stratification, and management," *American journal of hematology*, vol. 95, no. 8, pp. 978–989, 2020.
- [62] A. Joly, H. Goëau, S. Kahl, L. Picek, T. Lorieul, E. Cole, B. Deneu, M. Servajean, A. Durso, H. Glotin *et al.*, "Overview of lifeclef 2022: an evaluation of machine-learning based species identification and species distribution prediction," in *International Conference of the Cross-Language Evaluation Forum*

- for European Languages. Springer, 2022, pp. 257–285.
- [63] K. Maheswari, C. Siva, and G. N. Priya, "An optimal cluster based intrusion detection system for defence against attack in web and cloud computing environments," *Wireless Personal Communications*, vol. 128, no. 3, pp. 2011–2037, 2023.
- [64] S. Durand, Q. Lian, J. Jing, M. Ernst, M. Grelon, D. Zwicker, and R. Mercier, "Joint control of meiotic crossover patterning by the synaptonemal complex and hei10 dosage," *Nature communications*, vol. 13, no. 1, p. 5999, 2022.
- [65] N. J. Beutell and N. Gopalan, "Pathways to work-family synergy: resources, affect and wellbeing," *Journal of Family Studies*, vol. 27, no. 4, pp. 556–572, 2021.
- [66] F. G. Naveca, V. Nascimento, V. C. de Souza, A. d. L. Corado, F. Nascimento, G. Silva, Á. Costa, D. Duarte, K. Pessoa, M. Mejía et al., "Covid-19 in amazonas, brazil, was driven by the persistence of endemic lineages and p. 1 emergence," *Nature medicine*, vol. 27, no. 7, pp. 1230–1238, 2021.
- [67] F. Lopes, L. R. Oliveira, A. Kessler, Y. Beux, E. Crespo, S. Cárdenas-Alayza, P. Majluf, M. Sepúlveda, R. L. Brownell Jr, V. Franco-Trecu *et al.*, "Phylogenomic discordance in the eared seals is best explained by incomplete lineage sorting following explosive radiation in the southern hemisphere," *Systematic biology*, vol. 70, no. 4, pp. 786–802, 2021.