

INFLUENCE OF VIRTUAL WORK ON THE ATTITUDE OF WORKERS IN PERUVIAN MUNICIPALITIES

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Abstract

A documentary review was carried out on the production and publication of research papers concerning the study of the variable Influence of Virtual Work on the attitude of Workers. The purpose of the bibliometric analysis proposed in this document is to know the main characteristics of the volume of publications registered in the Scopus database during the period 2016-2021, achieving the identification of 1003 publications. The information provided by the said platform was organized using tables and figures categorizing the information by Year of Publication, Country of Origin, Area of Knowledge and Type of Publication. Once these characteristics were described, the position of different authors regarding the proposed topic was referenced through qualitative analysis. Among the main findings of this research, it is found that Brazil, with 507 publications, is the Latin American country with the highest production. The area of knowledge that made the greatest contribution to the construction of bibliographic material referring to the study of the influence of virtual work on the attitude of workers was computer science with 684 published documents, and the type of publication that was most used during the period mentioned above was the conference proceedings, representing 59% of the total scientific production.

Keywords: Virtual Work, Motivation, Workers' Attitude.

1. Introduction

Virtual work is the work modality mediated by information technologies with technological tools that allow performing activities without being in a physical workplace, so it offers flexibility by being able to work from anywhere from any technological device. This modality of work was first implemented to complement the work that was performed in offices or any physical space, but over time this modality has gained strength by being compatible with industry 4.0 and the digitization of most processes.

Virtual work emerged as the labor structure of choice in early 2020 when it was declared a pandemic as a result of COVID 19, so in order not to continue with the economic and administrative activities of companies, remote work was implemented, being digital platforms and virtual spaces the new workplaces. This brings with it new needs and difficulties, not only in the adaptation of jobs to web pages and virtual workplaces but also in the welfare of employees since this change of work environment brings with it certain difficulties that affect job

performance and the attitude of workers by presenting higher levels of stress and anxiety that trigger the burnout syndrome in workers by presenting longer working hours since the workspace and time at home are not differentiated. Although jobs must be adapted to ICTs to be taken as a reference for the business growth of a country, the attitude of workers to these measures must also be taken into account, Palomino and Ramirez (2019) state that the attitude towards virtual collaboration is the sum of feelings, beliefs and positive or negative opinions towards virtual collaboration and is an important issue today as this modality is adopted much more frequently since the attitude of workers on this work mode influences the growth of the company.

Thanks to the above, it can be said that although virtual work was born as a complementary activity to the work done in the office, it is currently used by the use of ICT 100% remote, so it should be taken into account what this implies for companies and how it influences the attitude of workers and the proper development of their functions. Therefore, it is important to know in terms of bibliographic resources, the current state of research concerning the Influence of Virtual Work on the attitude of workers, so a bibliometric analysis of the scientific production registered in the Scopus database during the period 2016-2021 is proposed to answer the question: How has been the production and publication of research papers related to the study of the variable Influence of Virtual Work on the attitude of workers in the period 2016-2021?

2. General objective

To analyze from a bibliometric and bibliographic perspective, the production of high-impact research papers on the variable The Influence of Virtual Work on the attitude of Workers during the period 2016-2021.

3. Methodology

A quantitative analysis of the information provided by Scopus under a bibliometric approach on the scientific production concerning the Influence of Virtual Work on the attitude of Workers is carried out. Likewise, it is analyzed from a qualitative perspective, with examples of some research works published in the area of the study mentioned above, from a bibliographic approach to describe the position of different authors on the proposed topic.

The search is carried out through the tool provided by Scopus and the parameters referenced in Table 1 are established.

3.1 Methodological Design

	PHASE	DESCRIPTION	CLASSIFICATION
PHASE 1	DATA COLLECTION	Data was collected using the Scopus web page search tool, through which a total of 1003 publications were identified.	Published papers whose study variables are related to The Influence of Virtual Work on the attitude of Workers. Trabajos de investigación

			publicados durante el Periodo 2016-2021. Limited to Latin American countries. Without distinction of area of knowledge. Without distinction of the type of publication.
PHASE 2	CONSTRUCTION OF ANALYSIS MATERIAL	The information identified in the previous phase is organized. The classification will be made through graphs, figures and tables based on data provided by Scopus.	Word Co-occurrence. Year of publication Country of origin of the publication. Area of knowledge. Type of publication
PHASE 3	DRAFTING OF CONCLUSIONS AND FINAL DOCUMENT	After the analysis carried out in the previous phase, the study proceeded to the drafting of the conclusions and the preparation of the final document.	

Table 1. Methodological design.

Source: Own elaboration (2022)

4. Results

4.1 Co-occurrence of words

Figure 1 shows the co-occurrence of keywords within the publications identified in the Scopus database.

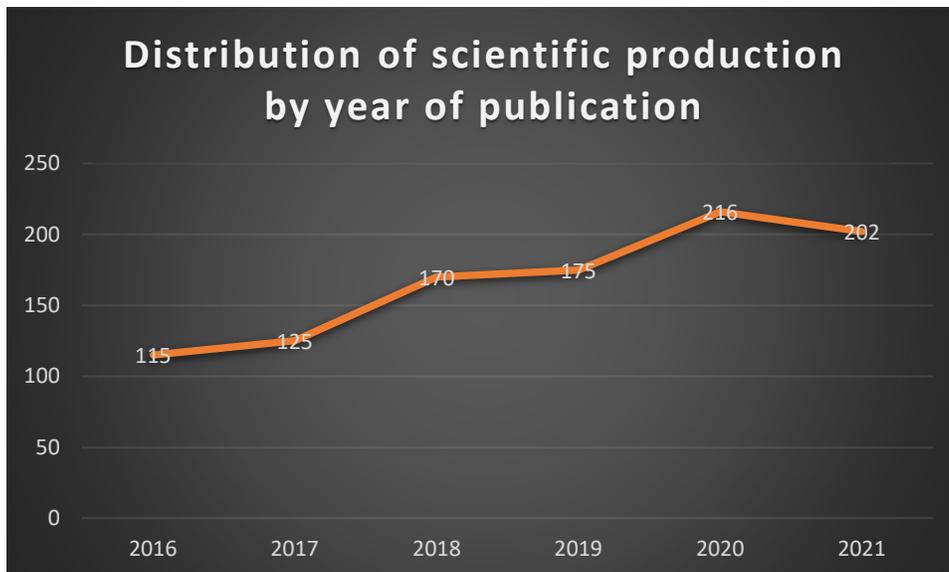


Figure 2. Distribution of scientific production by year of publication.

Source: Own elaboration (2022); based on data provided by Scopus.

2020 is the year with the highest number of documents related to the variables under study presenting 216 documents in total, within which is the title “E-Leadership and Telework in times of COVID-19 and beyond: What we know and where we are going” (Contreras et al., 2020). This document shows a literature review to study the existing knowledge on telework and e-leadership and analyzes the alleged challenges taking into account that with the COVID 19 the transition from face-to-face to virtual mode was abrupt presenting certain difficulties in the adaptation of the company because although telework is a great business opportunity, which depends on the technological advancement of organizations considering the leadership as an essential tool to carry out business functions remotely. So it is concluded that managers must adjust the structure of companies, making them less hierarchical and developing new skills to establish a solid and reliable relationship with their employees to maintain their competitiveness and the welfare of workers.

In second place is 2021, with 202 papers registered in Scopus among which is the paper entitled “Impact of COVID-19 outbreak on employee performance: moderating role of industry 4.0 base technologies” (Narayanamurthy & Tortorella, 2021). This paper has as its main objective to examine the impact of COVID-19 labor implications on employee performance and determine the role of 4.0 technologies in these processes. For this purpose, a study was conducted with 106 employees who were interviewed and surveyed and it was found that the home office, job insecurity and virtual connection affect the performance of employees and influence their attitude towards the virtual mode as new needs for a good working environment arise.

4.3 Distribution of scientific production by country of origin.

Figure 3 shows the distribution of scientific production according to the nationality of the authors.

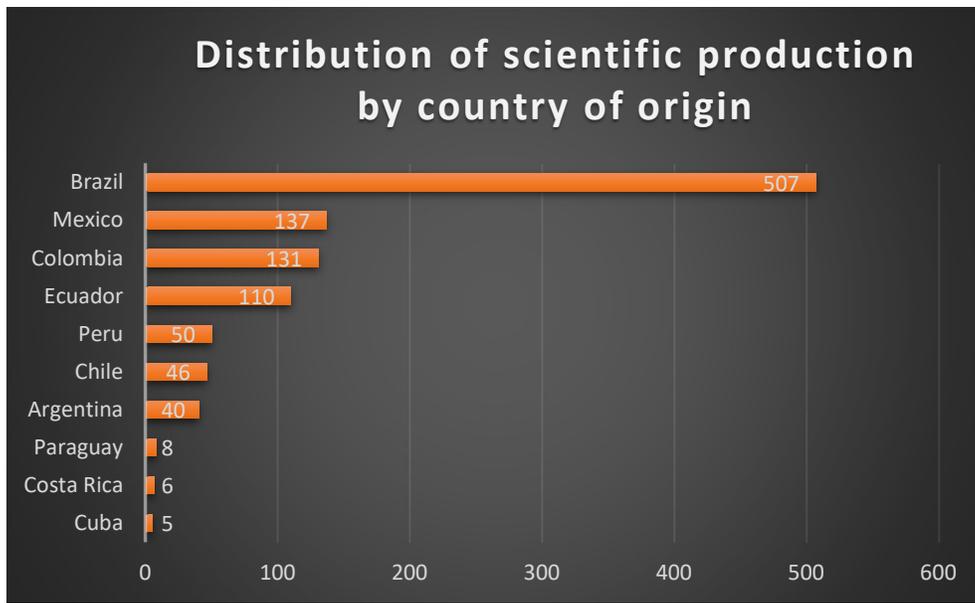


Figure 3. Distribution of scientific production by country of origin.

Source: Own elaboration (2022); based on data provided by Scopus.

Brazil is the Latin American country with the largest contribution to research related to the Influence of Virtual Work on the attitude of Workers presenting 507 documents within which is the title “Digital competence, role stress and commitment: Towards a positive mental health in Latin American teachers” (Deroncele-Acosta et al., 2021). This document has as its main objective the evaluation of role stress, engagement and digital competencies in the educational sector and how this affects workers to teachers. Therefore, a study was conducted with 300 teachers from 6 countries where it was determined that in general, they have a high level of engagement and a medium level of role stress, all this because of the changes of modality which affect the attitude of teachers towards their work, finding that positive self-management in mental health helps to maintain the welfare of employees in the process of adapting to the new mode of work and their specific needs. At this point, it is worth noting that the production of scientific publications, when classified by country of origin, presents a special characteristic and that is the collaboration between authors with different affiliations to both public and private institutions, and these institutions can be from the same country or different nationalities so that the production of an article with co-authorship of different authors from different countries of origin allows each of the countries to add up as a unit in the general publications. This is best explained in Figure 4, which shows the flow of collaborative work from different countries.

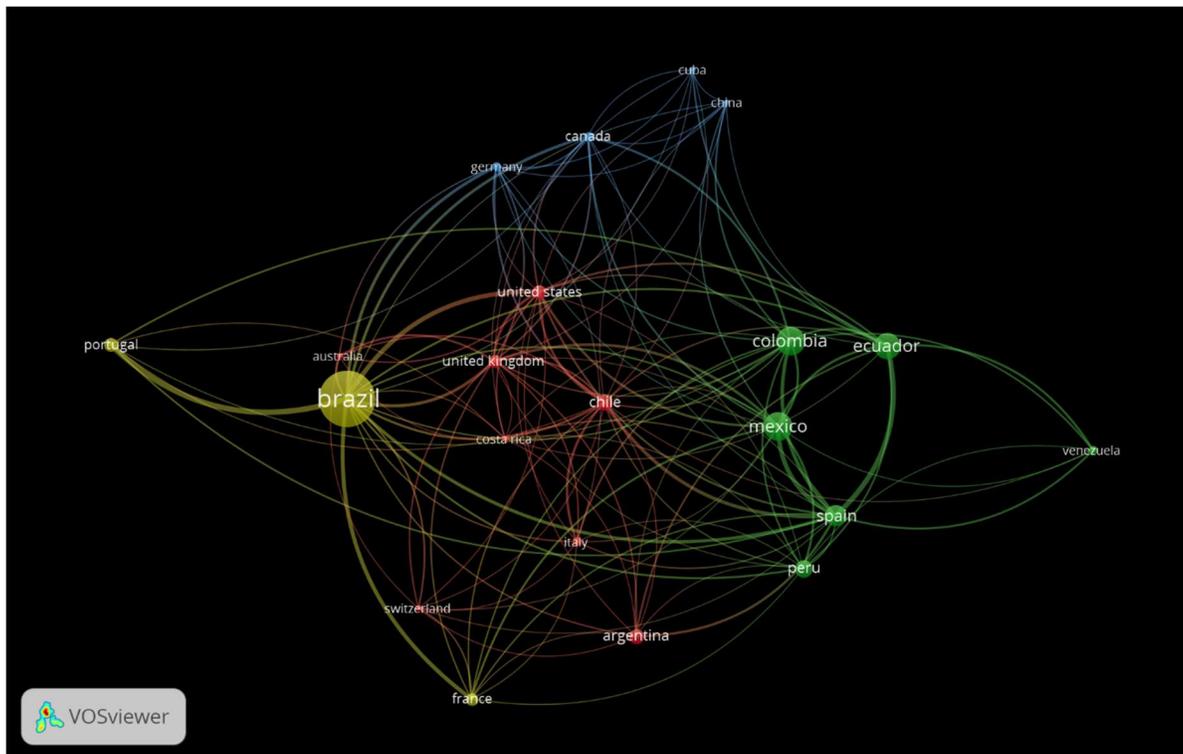


Figure 4. Co-citations between countries.

Source: Own elaboration (2022); based on data provided by Scopus.

As mentioned above, Brazil is the Latin American country with the greatest contribution to research related to the variables under study, with publications in collaboration with authors from Portugal, Australia, the United States and Germany, which shows the interest of countries outside Latin America in learning about virtual work as a labor modality in Latin America and its influence on the attitude of workers. In second place is Mexico with 137 publications co-authored with countries such as Colombia, Ecuador, Peru and Spain, carrying out comparative studies to determine the progress of countries in the region, among these documents is “A framework for using virtual reality for behavioral change to promote safety and health at work” (Rebelo, Noriega, & Veronesi, 2019). This document has as its main objective to discuss about the potentialities of virtual reality for behavioral change particularly related to safety situations at work presenting a framework for action that allows the implementation of virtual reality in workspaces. The result was that this framework can not only improve worker's behavior by increasing awareness of potential risks in real work but also unconsciously influence their routine behaviors leading to job safety

4.4 Distribution of scientific production by area of knowledge

Figure 5 shows how the production of scientific publications is distributed according to the area of knowledge through which the different research methodologies are executed.

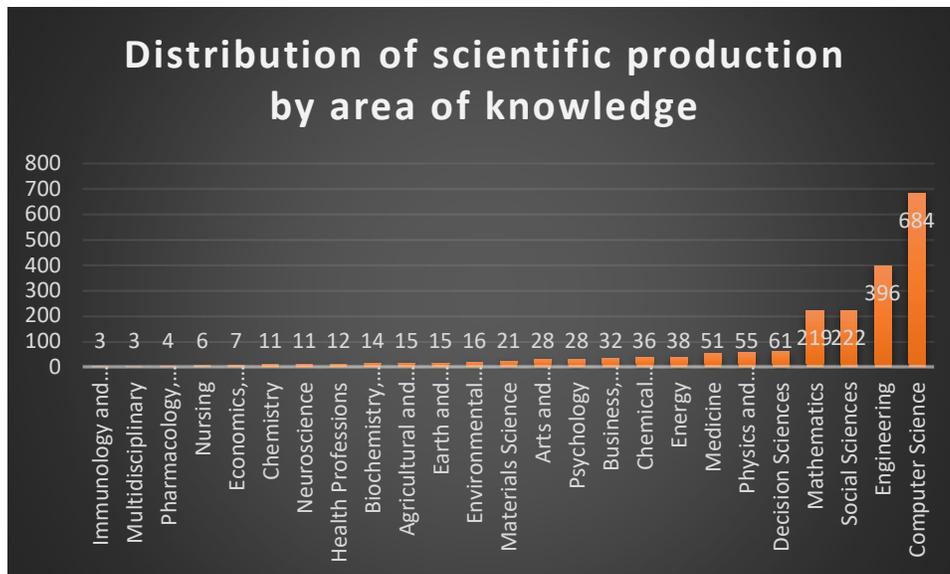


Figure 5. Distribution of scientific production by area of knowledge.

Source: Own elaboration (2022); based on data provided by Scopus.

Computer Science is the area of knowledge with the largest number of contributions through the theories that are framed in it, in the search for new knowledge on the Influence of Virtual Work on the attitude of Workers presenting 684 documents in total, within these studies is the one entitled “Entrepreneurial Vision Module: Lessons from the Pandemic” (Gwynn & Zavala, 2021). This document has as its main objective to share the design and main results obtained after implementing an “Entrepreneurial Vision” module with emphasis on the use of distance work within the curricular program of the undergraduate careers of the School of Engineering of a university in Chile, so a questionnaire was conducted to 894 students where it could be evidenced that the model should focus more on 'how' the sessions should be structured to teach content rather than 'what' to teach and design participatory activities.

In second place is Engineering with 396 documents written following the guidelines of the topics related to that area. Within these documents is “Virtual Reality Environment as a Developer of Labor Competencies” (González-Mendivil et al., 2021). This document aims to determine the influence of virtual environments in the teaching and development of labor competencies, so a study was conducted with 30 students from 3 different disciplines where substantial evidence was found that high levels of development of both professionals and students have been achieved.

4.5 type of publication

Figure 6 shows how the bibliographic production is distributed according to the type of publication chosen by the authors.

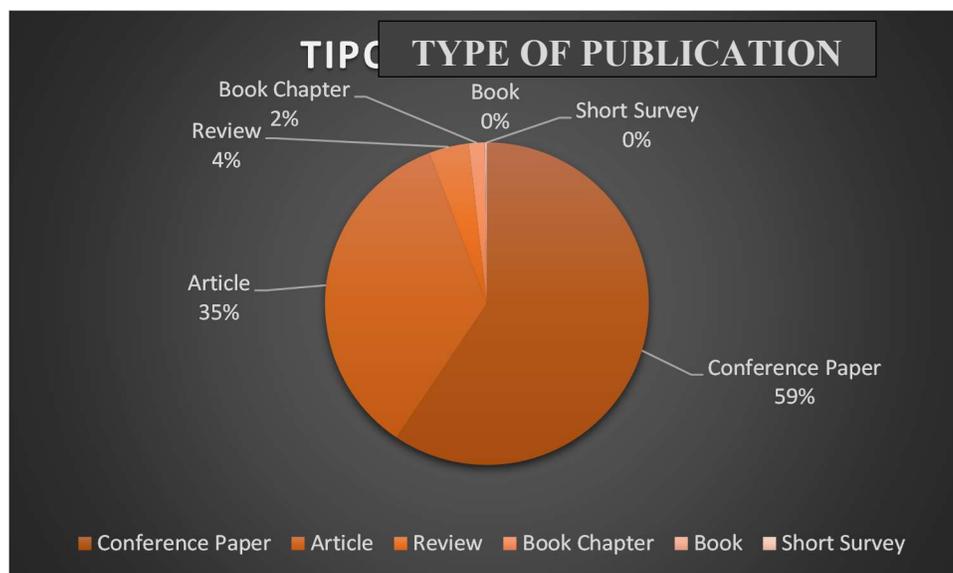


Figure 6. Type of publication

Source: Own elaboration (2022); based on data provided by Scopus.

As shown in Figure 6, within the different types of publications, 59% of the total number of documents identified through Phase 1 of the Methodological Design, correspond to conference proceedings, among which is the one entitled “Analysis of the Work-Home System and Musculoskeletal Discomfort of Workers in the Context of the Covid-19 Pandemic” (Escobar Galindo et al., 2021). This document has as its main objective to analyze the factors of the work-home system and its connection with the comfort of workers, musculoskeletal discomfort and the perceived quality of work, this study was conducted with 196 workers in Peru which consisted of 4 sections that allowed concluding that the work-home systems are not prepared to perform office work in Peru affecting the work performance and the attitude of workers in front of this new modality.

In second place are the journal articles, which represent 35% of the total number of documents registered in this study, among which is the title “Virtual leadership: keys for its analysis and management” (Gentilin & Madrigal, 2021). This document has as its main objective to identify the key factors related to virtual leadership and propose a scheme to analyze and manage teams in virtuality from a literature review, which resulted in that leadership in virtual environments should be considered as a shared phenomenon and that the key factors with greater impact on virtual leadership are communication, trust and team cohesion important in the welfare and motivation of workers, allowing them to have a better performance.

5. Conclusions

Thanks to the bibliometric analysis proposed in the present research, it can be determined that Brazil is the Latin American country with the largest number of bibliographic records in the Scopus database during the period from 2016 to 2022 with a total of 507 documents. The scientific production related to the study of The Influence of Virtual Work on the attitude of Workers has presented an important growth during the period previously indicated, going from 115 publications in 2016 to 202 units in 2021 being 2020 the year with the highest number of publication with 216 documents, i.e., it was possible to double the creation of bibliographic

records in a period of 5 years, which indicates the importance of knowing the factors that affect the attitude of workers facing the new virtual work modality and its implications in performance.

Virtual work is the labor modality implemented by the technological transformation that society has experienced in recent years, although this concept is implemented since the beginning of the century, in 2020 because of the pandemic declared by COVID 19 was in greater boom as the only way to continue with the business administrative activities and avoid a larger economic crisis. This brings with it certain needs of the modality, such as constant connection to the Internet, and well-stipulated work schedules, among others. During this period there were certain affectations on the mental and physical health since high levels of anxiety and stress were evidenced as it was a too fast transition that did not give time to the companies to adapt to this model and to implement necessary measures to preserve the well-being of the workers, this affects their attitude both for the company and for this labor modality which affects the business growth and the perception that the workers obtain from the company, which is translated in delays in the fulfillment of the business goals. All of the above allows this article to conclude by highlighting the importance of having good working conditions in virtual work to protect the welfare of employees and allow them to play an active role in organizational growth. It is for this reason that the need for studies such as the one presented in the present document is emphasized, which make a tour of those texts that address the aforementioned topic, to give the reader a broad view of the current situation of the literature on The Influence of Virtual Work on the attitude of Workers.

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