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CURRENT OVERVIEW OF SCIENTIFIC PRODUCTION ASSOCIATED WITH GOVERNANCE IN UNIVERSITY : A BIBLIOMETRIC ANALYSIS

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KEYWORDS

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University Institutions
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ABSTRACT

The main objective of this research is to identify the current panorama of scientific production associated with governance in university institutions. A bibliometric analysis was developed in Scopus using R Core Team 2022-Bibliometrix and Vosviewer software. The results highlight the countries with the highest productivity in the topic of study, with the most representative authors favoring the understanding of governance. The main thematic clusters stand out. It recognizes the role of university governance and its migration to direct spaces and the transition from a face-to-face model.

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1. Introduction

With the arrival of the pandemic COVID 19 in the world the university management in virtual environments, takes a new boom, which establishes an understanding that massifies the use of the web associated with academic training, face-to-face institutional processes become a technological mediation of urgency, which tends to serve internal and external customers, for Al-Youbi, et al. (2020), the value of the added by the workforce required in universities, where it starts from the how the dynamics of attention on how the labor market behaves, and what is the affectation in the absence of a school daily life in universities that force a technological mediation not only to students, but, to teachers and administrative staff, but the impact is evident in academic enrollments. However, the income versus organizational outflows invite to merge departments and direct units of the operation, it is important to recognize that the resistance to invest in non face-to-face modalities by university managers generates uncertainty about Latin American education.

However, Rueda & Chamorro (2020), by identifying good and bad practices, which visualize a path on how virtuality increases the value of student attention, without losing quality, without having precise organs of authority, that from the skepticism of students who have a negative expectation of how to achieve the appropriation of these disruptive models and applied by the global need, quarantine forces universities to react effectively, to meet the educational needs, promoting autonomous learning, identifying the importance of leadership oriented to institutional reality.

For Ramírez (2020), the digital transformation of universities begins by recognizing an information age accelerated by the need to care for the individual, safeguarding their interests, adapting to the media and installed capacity, the role of the physical and digital structure for its investment have a direct coherence with those based on the new normality, these appreciations arise from the framework of transformation and development in Latin America related to the pandemic COVID-19, identifying the number of enabled university campuses, which does not recognize that the efforts were increased by the arrival of the pandemic, where the investment in competitive media, in the improvement of websites, in the increase of marketing, according to the potential customers that approach the reality necessary to subsist in the models focused on the university of tomorrow.

- Despite some efforts to consolidate the study of the importance of governance in university institutions, it is pertinent to identify the research trends associated with this topic. Hence, this study provides an answer to the following questions:
- What is the evolutionary development of the production of scientific papers associated with governance in university institutions?
- Who are the most representative authors of research related to governance in university institutions?
- What are the papers that have achieved the greatest impact according to their number of citations?
- Which journals have the highest production around governance in university institutions with an important citation level?
- Which countries lead in scientific production, citation levels and cooperation in the area of governance in university institutions?
- What is the emerging conceptual structure of the scientific production associated with governance in university institutions?

This is followed by the methodological proposal, the results based on bibliometric indicators, and finally the discussion and conclusions of the study.

In the development of bibliometrics, and after running the dataset in Scopus, a total of 675 documents published from 1990 to 2022 were obtained. All types of documents were included, except retractions, editorial notes, short surveys and reviews of notes. The exclusion of areas of knowledge such as Materials Science, Dentistry, Chemical Engineering, Biochemistry, Genetics and Molecular Biology, Health Professions, Earth and Planetary Sciences, Nursing, Physics and Astronomy, and Energy is highlighted, due to their disciplinary distance from the proposed topic. The statistical analysis was executed in December 2022 using Bibliometrix (The R Project for Statistical Computing) (Aria & Cuccurullo, 2017), as well as VOSviewer, which is a software based on an interface with significant graphical benefits (Van Eck & Waltman, 2010).

The search strategy in Scopus is visualized from the following syntax: (TITLE-ABS-KEY ("university governance") OR TITLE-ABS-KEY ("university governance")) AND (EXCLUDE (SUBJAREA , "ENER") OR EXCLUDE (SUBJAREA , "EART") OR EXCLUDE (SUBJAREA , "NURS") OR EXCLUDE (SUBJAREA , "PHYS") OR EXCLUDE (SUBJAREA , "HEAL") OR EXCLUDE (SUBJAREA , "BIOC") OR EXCLUDE (SUBJAREA , "CENG") OR EXCLUDE (SUBJAREA , "DENT") OR EXCLUDE (SUBJAREA , "MATE")) AND (EXCLUDE (PUBYEAR , 1987) OR EXCLUDE (PUBYEAR , 1984) OR EXCLUDE (PUBYEAR , 1983) OR EXCLUDE (PUBYEAR , 1980) OR EXCLUDE (PUBYEAR , 1978) OR EXCLUDE (PUBYEAR , 1977) OR EXCLUDE (PUBYEAR , 1976) OR EXCLUDE (PUBYEAR , 1975) OR EXCLUDE (PUBYEAR , 1973) OR EXCLUDE (PUBYEAR , 1972)) AND (EXCLUDE (DOCTYPE , "ed") OR EXCLUDE (DOCTYPE , "no") OR EXCLUDE (DOCTYPE , "tb"))).

2. Research development

It is relevant to visualize the evolution of the production of scientific documents associated with governance in university institutions to date, in order to answer the first research question, highlighting that 675 documents were registered between 1990 and 2022, of which 488 are articles, 25 books, 96 book chapters, 32 conference papers, and 34 reviews. A total of 1252 authors were registered in the study, obtaining an average of 2.23 authors per document. It should be noted that the average number of citations per document since its publication is 9.95, the annual average number of citations per document is 6.9, and 29772 references have been used in the bibliometrics.

Peña & Fernández (2013), this study presents how emotions when analyzing their relationship, allows to show that change is assimilated more quickly by students, but has a personal cost for teachers, a slower understanding in managers, the study yielded the results associated with behaviors and emotions, which are related in digital organizations, is crucial to determine the guidelines that are observed in their development and daily work, this opportunity to achieve an articulation that require becoming an emotional potential in students, teachers, and managers of universities in obtaining better academic performance, interpersonal relationships and comprehensive psychological well-being, which could result in a more optimal working future for new generations. Similarly, in this research (Peña & Fernández, 2013), individual differences were detected in all the study variables, which shows that it seems that the manifestation of emotional intelligence is related to the type of educational program the students are enrolled in, with the lowest scores in all cases being obtained by students in the economic-administrative and technical areas evaluated. This could be due to the lack of emotional education in the previous levels of studies, as well as the absence of a subject in the respective curricula that is focused on developing the students' level of emotional intelligence. Likewise, the aforementioned study reflects how technological interaction modifies the *status quo* of students and how this relationship is directly proportional to academic results, in the virtual perspective it is necessary to have scenarios rich in information for decision making, a typical example of the association of variables.

These differential findings detected in the research by educational program of study contribution of the authors Pineda & Allison (2008), and Del Pino, et al. (cited in Austin & Saklofske, 2010), in such a way that the results obtained in this work, as well as the absence of educational programs at the technical and higher levels studied, in which emotional intelligence is included within their curricular and extracurricular activities, as pointed out by Del Pino (2012), raise about how to apply models in administrative faculties, which lack digital exercises, as their adaptation differs an unacceptable emotional behavior, these results denote the need to raise the inclusion of emotional intelligence as part of the actions of public educational management in the observed programs, allowing the incursion with free courses of adaptation of the virtual context, or extracurricular type by attending events, forums, congresses, symposia, workshops where the premise is the digital citizenship competence, where academic managers undergo a transformation by participating in the changes in the scenario and the way to communicate with the platforms. What is observed in these interactions, relates to the updating of curricular and support means, careers such as accounting that are supported on a digital basis do not have the support and support of technological recognition, accounting management software is diversified by software houses depending on the continent, what suffers is in the "customization" of its semantic deployment. This situation takes on greater importance in the specific case of students of the bachelor's degree in administration and accounting technicians, because they are being trained to be the future leaders of companies in the administrative and accounting areas that serve as backbones of labor excellence, productivity and competitiveness, so they require an improved emotional intelligence

Goleman (2010), to face the challenges they face in their occupational life, so that they can achieve a successful individual professional development, which can also contribute to the improvement of organizations in the new century.

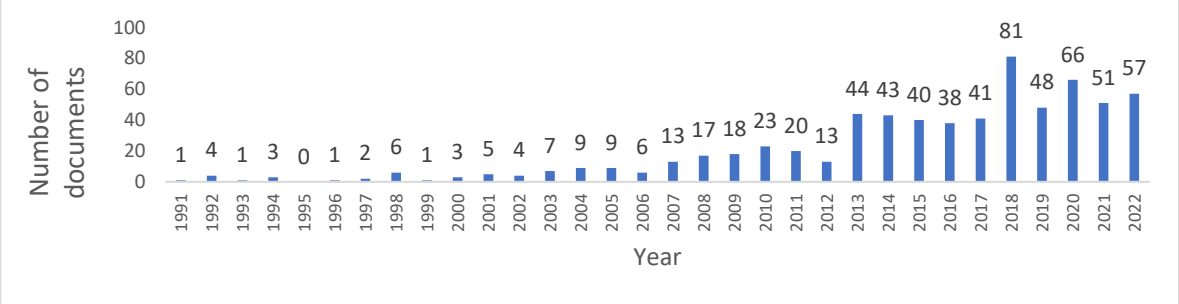
Researchers such as Kattoua, et al. (2016), due to the rapid growth of internet technology, universities around the world are investing heavily in e-learning systems to support their traditional teaching and enhance their learning Experience and student performance, this exponential growth scenario is experienced by universities, which start by their first foray into the business, but lack technical equipment to meet their requests, however, the success of an e-learning, is based on the educational system, its adaptations, the pedagogical model, the digital resources, the human talent necessary for its tactical deployment, depends on the understanding of certain background factors, which influence the acceptance of students and use of such e-learning systems, related to the country of origin, the dynamics of adaptation, as well as the convenience of use.

According to Guirao-Goris, et al. (2008), this methodology implies the detailed, selective and critical study that integrates the essential information in a unitary and overall perspective, for the case of research on how virtual education is approached in South America, what are the critical factors of decision making in an implementation process, what is the emotional tendency necessary to remedy these work impasses, the reviewer has a question, collects data (in the form of previous articles), analyzes them and draws a conclusion.

3. Results

Figure 1 describes the annual production of documents between 1991 and 2022. The low scientific production on the topic in the 1990s and in the first decade of the 2000s is observed; however, since 2013, there has been a significant growth in this production, evidencing the emerging interest in governance in university institutions as a research topic, mainly in areas related to the social sciences.

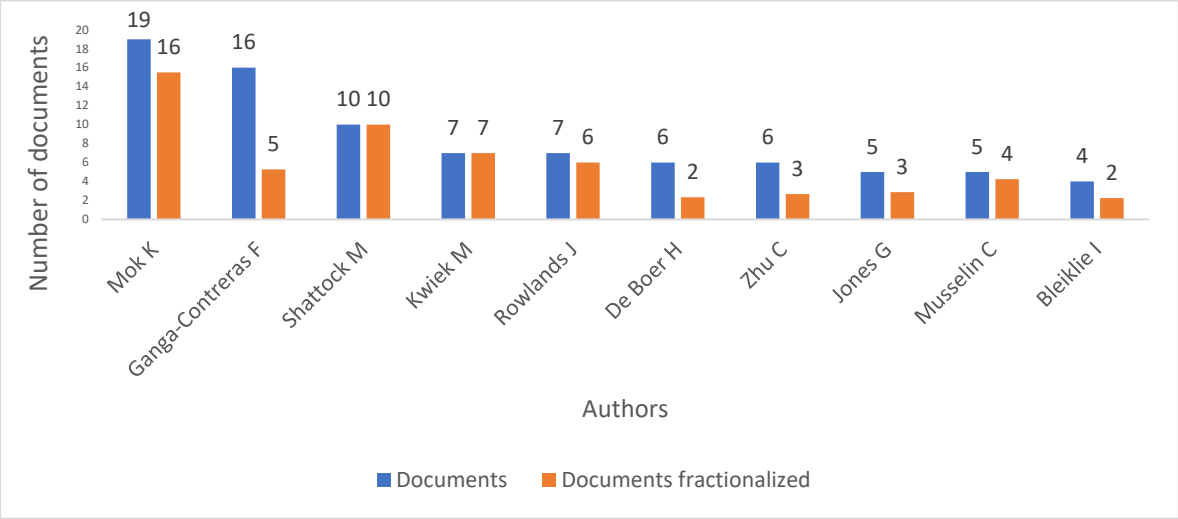
Figure 1. Annual document production



Source: own elaboration

The most representative authors in research on governance in university institutions at the global level are listed in Figure 2. Mok K, Ganga-contreras, Shattock M, Kwiek, Rowlands J, De Boer H, Zhu C, Jones G, Musselin C, Bleiklie, focusing their research efforts on university management and virtual governance.

Figure 2. Authors with the highest scientific productivity



Source: own elaboration

Figure 2 shows an important relationship with Lotka's Law in Table 1, which presents a description that explains the quantitative relationship between authors and published documents. In this regard, there are 1103 authors who have published only one document, 104 authors with two published documents, 30 authors with three documents, 6 authors with four documents, 2 authors with 5, 6 and 7 documents, one author with 10 documents, one author with 16 documents, and finally one author with 19 published documents.

Table 1. Lotka's Law

Documents written	Number of Authors	Proportion of authors
1	1103	0,881
2	104	0,083
3	30	0,024
4	6	0,005
5	2	0,002
6	2	0,002
7	2	0,002
10	1	0,001
16	1	0,001
19	1	0,001

Source: own elaboration

In response to the third proposed question, Table 2 identifies the documents that have achieved the greatest impact according to their number of citations.

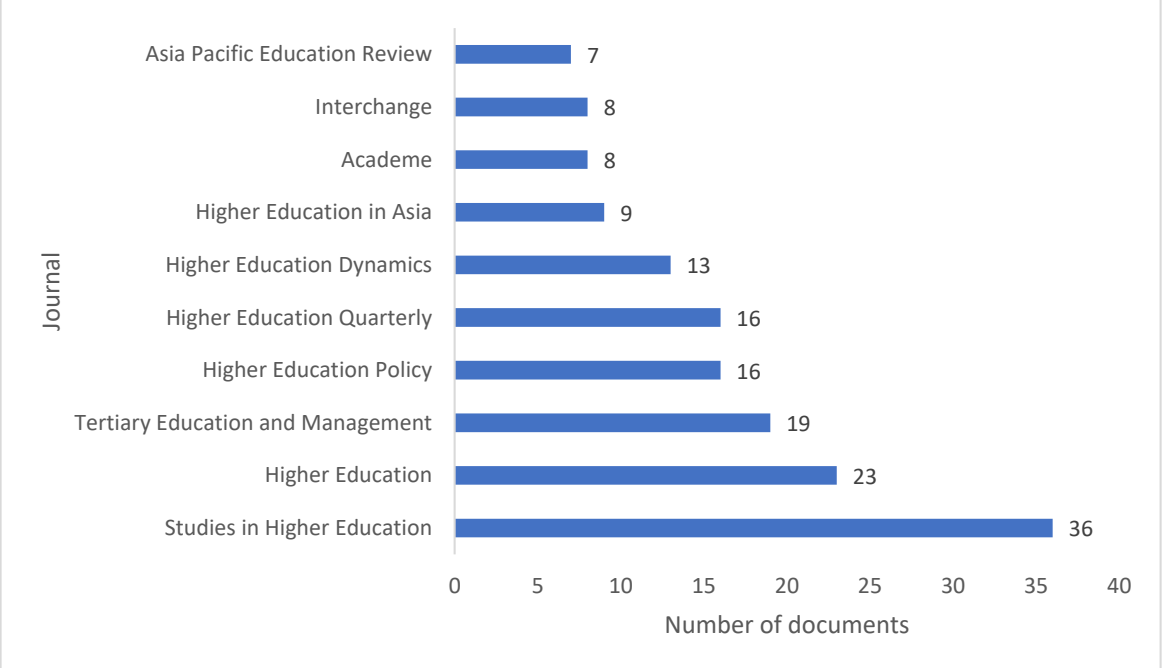
Table 2. Most cited documents

Authors	Title of document	Total citations	TC per year
Bleiklie & Kogan(2007)	Organization and Governance of Universities.	198	12,38
Parker (2011)	University corporatisation: Driving redefinition	197	16,42
Boer et al., (2005)	Orchestrating creative minds. The governance of higher education and research in four countries compared.	187	11,69
Kolsaker (2008)	Academic professionalism in the managerialist era: A study of English universities.	180	12,00
McCowan (2016)	Universities and the post-2015 development agenda: an analytical framework	146	14,60
Dobbins et al., (2011).	An analytical framework for the cross-country comparison of higher education governance.	131	10,92
Parker (2002)	It's been a pleasure doing business with you: a strategic analysis and critique of university change management.	110	5,24
Christensen (2011)	University governance reforms: potential problems of more autonomy?	107	8,92
Trakman (2008)	Modelling university governance.	84	5,60
Leisyte et al., (2009).	The balance between teaching and research in Dutch and English universities in the context of university governance reforms.	73	5,21

Source: own elaboration

Regarding the journals that have the highest production on the subject of governance in university institutions, which are listed in Figure 3, Studies in Higher Education, journals such as *Higher Education*, *Tertiary Education and Management*, *Higher Education Policy* stand out, as shown in Table 3.

Figure 3. Top 10 journals by number of documents.



Source: own elaboration

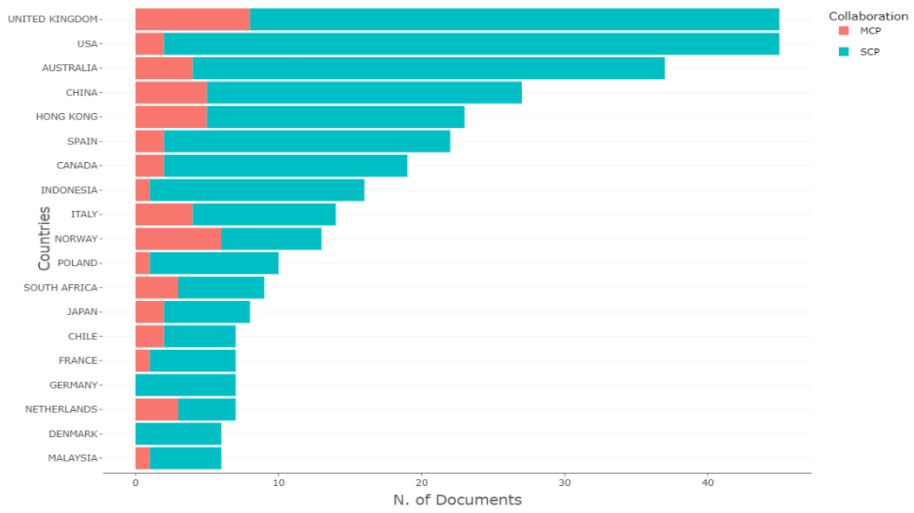
Table 3. Top 10 H, G and M indexes of leading journals

Journal	h_index	g_index	m_index	Total citations
Higher Education	16	23	0,5	787
Studies in Higher Education	15	27	0,938	780
Higher Education Quarterly	12	16	0,48	442
Tertiary Education and Management	9	14	0,391	221
Higher Education Policy	8	16	0,32	373
Asia Pacific Education Review	5	7	0,278	123
Higher Education Dynamics	5	7	0,278	54
Bordon	4	5	0,444	30
Critical Perspectives on Accounting	4	4	0,19	344
International Journal of Educational Management	4	5	0,25	107

Source: own elaboration

To answer the fifth question, the countries leading in scientific production, citation levels and cooperation in the area of governance in university institutions are identified. The Top 10 countries by production of documents on the subject are headed by the United States (123), followed by the United Kingdom (106), Chile (100), Australia (80), Spain (70), China (65), Indonesia (47), Canada (44), Italy (43), and Germany (31). Regarding the levels of international cooperation SCP and MCP by country, Figure 4 highlights the United Kingdom, United States, Australia, China and Hong Kong as the countries with the highest production of scientific papers associated with governance in university institutions for the SCP indicator, which determines that the authors belong to a single country; while the MCP indicator indicates scientific papers where at least one of the authors is from a different country, and in this case the top 5 countries are the United Kingdom, Norway, China, Hong Kong and Australia.

Figure 4. Levels of international cooperation SCP and CCM by country

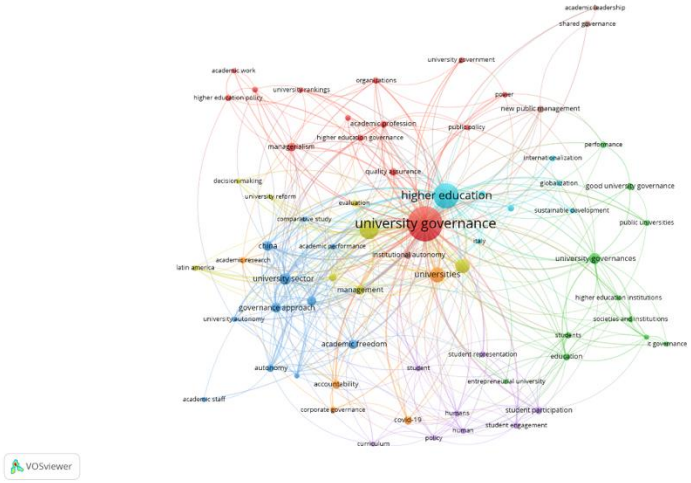


Source: own elaboration

In order to identify the emerging conceptual structure of the scientific production associated with brand awareness, it is relevant to recognize the co-occurrence of keywords of the authors analyzed in the bibliometrics and visualized in figure 5.

The first cluster (red) covers the primary concept of bibliometric analysis, such as university governance, accompanied by key words and converging words, highlighting the relationship of this cluster with the processes of administration of virtual university environments. Another cluster (blue) highlights the concepts of higher education, valuing the substantive functions of research, academia and extension, which makes this cluster the one that represents the brand value for the consumer. Finally, a last cluster (yellow) groups the terms of universities where the value of application in models of public and private aspects is recognized.

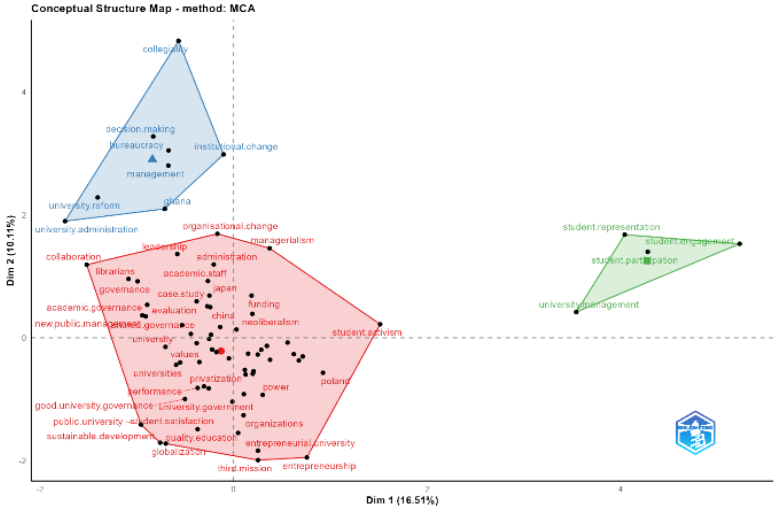
Figure 5. Co-occurrence of authors' keywords.



Source: own elaboration

Figure 6 describes 3 clusters that consolidate the conceptual structure of the study: is represented in 3 clusters the first one in green color relates the values of student representation, participation, university administration, the second cluster in blue color establishes relevant appreciations such as institutional change, administration, university reform, bureaucracy, tuition, the third cluster in red color recognizes the role of leadership administration, organizational changes, academic governance, values, privatization, governance educational policies, entrepreneurship and university entrepreneurship, sustainable development, new administrative policy. As the most representative.

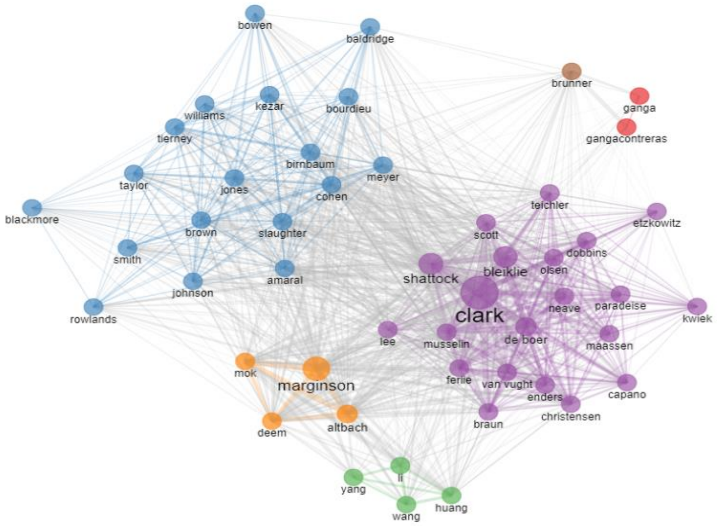
Figure 6. Conceptual structure of the study



Source: own elaboration

The bibliographic linkage is used to identify different thematic fronts around a research and allows exploring the literature that is produced and consumed in a scientific community (Orviz et al., 2021). In this regard, Figure 7 describes the presence of 3 clusters of authors the networks arranged in the authors' dialogue proposes as Clark as cluster leader among authors such as Kwiek, Capano, Christensen, Ferile, Musselin in purple, for the marginson network where authors such as Deem, Altbach, Mok in orange, in blue the most equal cluster without representation, Taylor, Bowen, Baidridge, Bourdieu, Meyer, Jones, Johnson, Blackmore, Rowlands represent the citation levels that establish connections on the concepts determined.

Figure 7. Co-citation of authors



4. Conclusions

Among the limitations presented in the study, the sole use of the Scopus database stands out, both for the bibliometric analysis and for the systematic review, preventing the identification of other associated research, and the recommendation, in the development of future studies, of the use of other databases, mainly Web of Science (WOS).

References

Aria, M. & Cuccurullo, C. (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics, 11*(4), 959-975. https://doi.org/10.1016/j.joi.2017.08.007

Bleiklie, I. & Kogan, M. (2007). Organization and Governance of Universities. Higher Education Policy, 20.

Boer, H. F., Enders, J., & Schimank, U. (2005). Orchestrating creative minds. The governance of higher education and research in four countries compared. *DANS is an institute of KNAW and NWO*, 02-17.

Christensen, T. (2011). University governance reforms: potential problems of more autonomy? *Higher education*, *62*(4), 503-517.

Dobbins, M., Knill, C., & Vögtle, E. M. (2011). An analytical framework for the cross-country comparison of higher education governance. *Higher education*, *62*(5), 665-683.

Kolsaker, A. (2008). Academic professionalism in the managerialist era: A study of English universities. *Studies in Higher Education*, *33*(5), 513-525.

Leisyte, L., Enders, J., & De Boer, H. (2009). The balance between teaching and research in Dutch and English universities in the context of university governance reforms. *Higher education*, *58*(5), 619-635.

McCowan, T. (2016). Universities and the post-2015 development agenda: an analytical framework. *Higher Education*, *72*(4), 505-523.

Parker, L. (2011). University corporatisation: Driving redefinition. *Critical perspectives on accounting*, *22*(4), 434-450.

Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, *84*(2), 523-538. https://doi.org/10.1007/s11192-009-0146-3

Orviz Martínez, N., Cuervo Carabel, T. & Arce García, S., (2021). Review of scientific research in ISO 9001 and ISO 14001: a bibliometric analysis. *Cuadernos de Gestión*, *21*(1), 29-45. https://doi.org/10.5295/cdg.191189no. https://doi.org/10.5295/cdg.191189no.

Parker, L. D. (2002). It's been a pleasure doing business with you: a strategic analysis and critique of university change management. *Critical perspectives on accounting*, *13*(5-6), 603-619.

Trakman, L. (2008). Modelling university governance. *Higher Education Quarterly*, *62*(1-2), 63-83.