Journal of Namibian Studies, 33 S2(2023): 2239–2250 ISSN: 2197-5523 (online)

FACTORS CONTRIBUTING TO STUDENT SCIENTIFIC PRODUCTION AND WRITING

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Abstract

A documentary review was carried out on the production and publication of research papers related to the study of the variables Student Scientific Production and Writing at the Latin American level. The purpose of the bibliometric analysis proposed in this document was to know the main characteristics of the volume of publications registered in the Scopus database during the period 2018-2022, achieving the identification of 234 publications. The information provided by this platform was organized through graphs and figures categorizing the information by Year of Publication, Country of Origin, Area of Knowledge and Type of Publication. Once these characteristics have been described, the position of different authors towards the proposed theme is referenced through a qualitative analysis. Among the main findings made through this research, it is found that Brazil, with 114 publications, was the country with the highest scientific production registered in the name of authors affiliated with institutions in that country. The Area of Knowledge that made the greatest contribution to the construction of bibliographic material referring to the study of Student Scientific Production and Writing was the Social Sciences with 204 published documents, and the Type of Publication most used during the period indicated above was the Journal Article with 213 documents of the total scientific production.

Keywords: Research, scientific production, scientific writing, students.

1. Introduction

As we well know, the term student refers to an individual who is in the process of acquiring basic or advanced knowledge related to one or more topics that will allow him to be certified through an educational institution according to his stage of training. Although initially teachers are limited to sharing with their students purely theoretical knowledge, they include exercises throughout their process where this theory must be applied in a practical way to generate better performance and greater recall, of whatever the subject, by the students. Precisely one of the best ways to strengthen the teaching-learning process is the development of research skills since they promote critical thinking from the constant reflections that are made on societyand any need or problem resulting in contributions for its solution or improvement through the knowledge previously acquired d and there the relevance of Scientific Production and Scientific Writing in student life.

Scientific production is defined by Ailín Martínez and Yelina Piedra as follows:

Scientific production (PC) is considered as the materialized part of the knowledge generated, it is more than a set of documents stored in an information institution. It is also considered to cover all the academic and scientific activities of a researcher. This phenomenon is linked to most of the events in which people are involved, on a daily basis, so the evaluation of it, taking into account the result of research and innovation work, is not a recent practice in the various disciplinary areas. Its study has intensified and systematized from the last two decades. (Martínez Rodríguez & Piedra Salomón, 2007)

While Scientific Writing is described in the article "Scientific Writing as a tool for the qualification of undergraduate students" as the (Pérez Ruiz, Serrano Guzmán, Solarte Vanegas, & Torrado Gómez, 2018) "bestmeans to transmit the knowledge acquired, generated or reproduced as a product in research and when it is part of the teaching-learning strategies, it also becomes an evaluation instrument".(Pérez Ruiz, Serrano Guzmán, Solarte Vanegas, & Torrado Gómez, 2018)

Taking into account the above, it is notorious that the contribution of our variables can be relevant in the acquisition of knowledge, however, our purpose is to determine the factors that contribute or arouse that interest in Latin American students. That is why this research article seeks to describe the main characteristics of the set of publications attached to the Scopus database and that are directly related to our variables, as well as the description of the position of certain authors affiliated with various institutions during the period between 2018 and 2022.

2. General objective

Analyze from a bibliometric and bibliographic perspective, the elaboration of works on the variables Student Scientific Production and Writing, at the Latin American level, during the period 2018-2022.

3. Methodology

This article is carried out through a mixed orientation research that combines the quantitative and qualitative method.

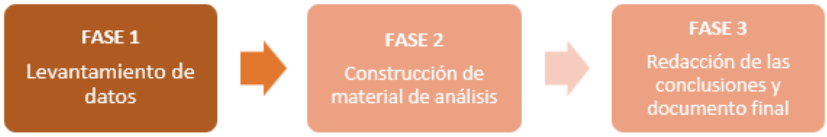
On the one hand, a quantitative analysis of the information selected in Scopus is carried out under a bibliometric approach of the scientific production corresponding to the study of the Student Scientific Production and Writing.

On the other hand, examples of some research works published in the area of study indicated above are analyzed from a qualitative perspective, starting from a bibliographic approach that allows describing the position of different authors against the proposed topic.

It is important to note that the entire search was performed through Scopus, managing to establish the parameters referenced in Figure 1.

3.1 Methodological design

Figure 1. Methodological design



Source: Authors.

3.1.1 Phase 1: Data collection

Data collection was executed from the Search tool on the Scopus website, where 234 publications were obtained from the choice of the following filters:

TITLE-ABS-KEY (scientific AND research, AND scientific AND production, AND students) AND PUBYEAR > 2017 AND PUBYEAR < 2023 AND (LIMIT-TO (AFFILCOUNTRY , "Brazil") OR LIMIT-TO (AFFILCOUNTRY , "Spain") OR LIMIT-TO (AFFILCOUNTRY , "Peru") OR LIMIT-TO (AFFILCOUNTRY , "Cuba") OR LIMIT-TO (AFFILCOUNTRY , "Mexico") OR LIMIT-TO (AFFILCOUNTRY , "Argentina") OR LIMIT-TO (AFFILCOUNTRY , "Chile") OR LIMIT-TO (AFFILCOUNTRY , "Ecuador") OR LIMIT-TO (AFFILCOUNTRY , "Paraguay") OR LIMIT-TO (

AFFILCOUNTRY , "Costa Rica") OR LIMIT-TO (AFFILCOUNTRY , "Nicaragua") OR LIMIT-TO (AFFILCOUNTRY , "Bolivia"))

- Published documents whose study variables are related to the study of Student Scientific Production and Writing.
- Limited to the years 2018-2022.
- Limited to Latin America.
- No publication area limit.
- Regardless of type of publication.

3.1.2 Phase 2: Construction of analysis material

The information collected in Scopus during the previous phase is organized and subsequently classified by graphs, figures and tables as follows:

- Co-occurrence of words.
- Year of publication.
- Country of origin of the publication.
- Area of knowledge.
- Type of publication.

3.1.3 Phase 3: Drafting of conclusions and outcome document

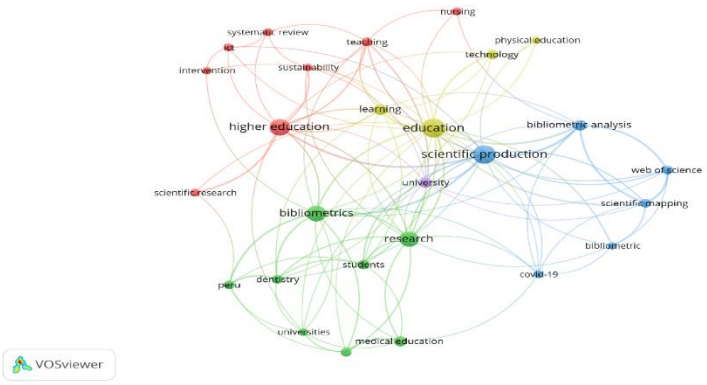
In this phase, we proceed with the analysis of the results previously yielded resulting in the determination of conclusions and, consequently, the obtaining of the final document.

4. Results

4.1 Co-occurrence of words

Figure 2 shows the co-occurrence of keywords found in the publications identified in the Scopus database.

Figure 2. Co-occurrence of words



Source: Own elaboration (2023); based on data exported from Scopus.

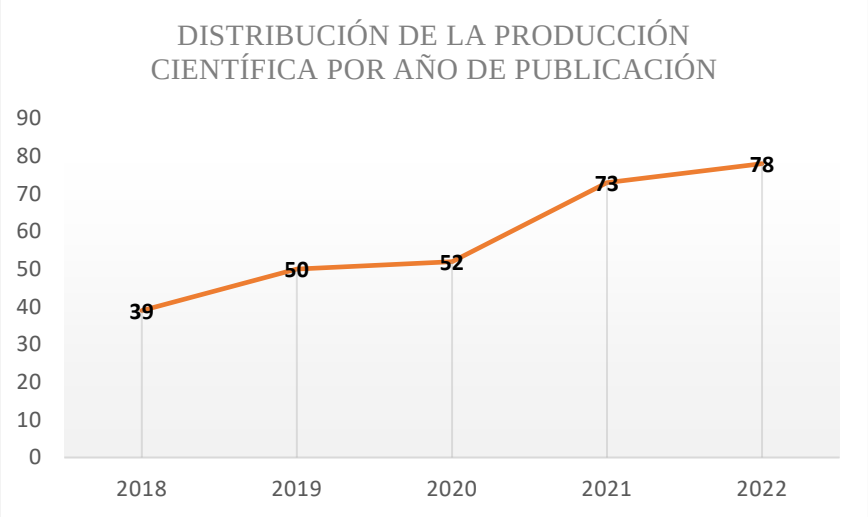
The data in Figure 2, exported from Scopus, shows us our variables and their relationship with other terms which we will explain below.

Research is recognized as one of the best mechanisms to impart lasting knowledge in the teaching-learning process, especially in the middle and middle stage where students have developed more their critical-analytical thinking that allows them to reach conclusions more objectively. Generally, the research carried out by the students is usually required in a mandatory way by the teachers since it can also be used as an evaluative instrument, however, the universities, today, have been awakening the investigative interest of the students through the creation of seedbeds that grant them additional merits and the recognition by the student community.

4.2 Distribution of scientific production by year of publication

Figure 3 shows how scientific production is distributed according to the year of publication.

Figure 3. Distribution of scientific production by year of publication.



Source: Own elaboration (2023); based on data exported from Scopus

In figure 3 we find the scientific production concerning the variables Student Scientific Production and Writing during the period between 2018 and 2022, which resulted in the publication of 237 documents, in the Scopus database, containing the keywords. Likewise, it is evident that some changes were experienced throughout the period. We started with the year 2018 with 39 documents, a number that increases considerably in the following years reaching the highest number of publications in 2022 with 78 documents.

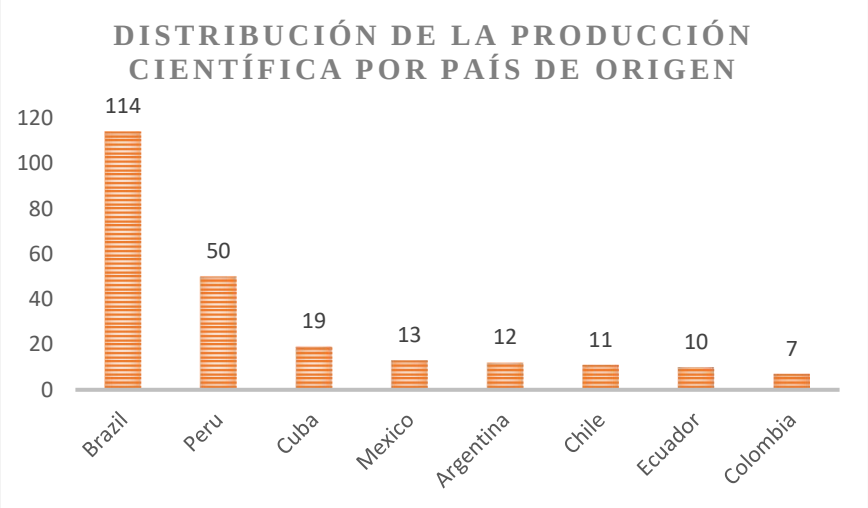
Precisely in 2022, the most outstanding article was the one entitled "Student research contest during the pandemic" in which it was sought

to determine "the (Carhuancho Mendoza, Guerrero Bejarano, Nolazco Labajos, & Saravia Ramos, 2022)research skills of students during the pandemic, specifying the factors associated with their achievement" through a basic mechanism implemented in 134 students to whom the "Chi Square" test was applied in order to (Carhuancho Mendoza, Guerrero Bejarano, Nolazco Labajos, & Saravia Ramos, 2022)" identify the factors associated with the achievement of competence". (Carhuancho Mendoza, Guerrero Bejarano, Nolazco Labajos, & Saravia Ramos, 2022) As a conclusion it was possible to demonstrate that factors such as "gender, age and master's degree are associated with the achievement of research competence in the participants of the study ", (Carhuancho Mendoza, Guerrero Bejarano, Nolazco Labajos, & Saravia Ramos, 2022)however there are still some weaknesses in students related to "the construction of scientific products according to current regulations, in the selection of the means of dissemination and preparation for perform statistical analysis, through different mathematical models". (Carhuancho Mendoza, Guerrero Bejarano, Nolazco Labajos, & Saravia Ramos, 2022)

4.3 Distribution of scientific production by country of origin.

Figure 4 shows how scientific production is distributed according to the nationality of the authors.

Figure 4. Distribution of scientific production by country of origin.



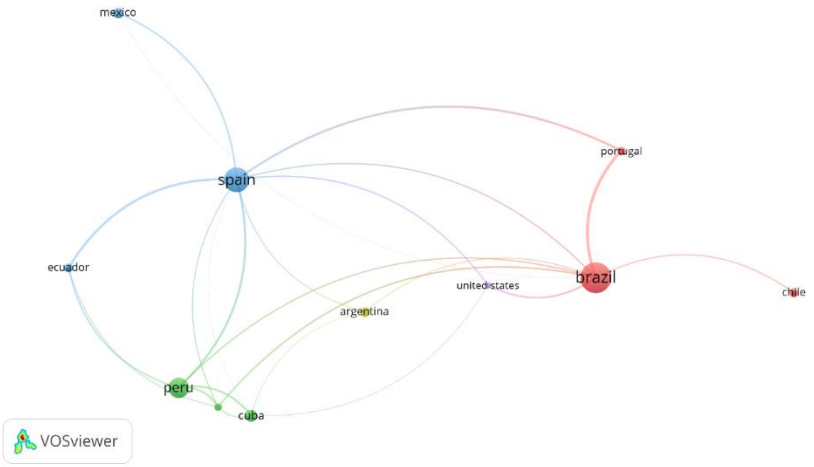
Source: Own elaboration (2023); based on data provided by Scopus.

In the study of Student Scientific Production and Writing, Brazil leads the list of published documents with a total of 1 14 records in the Scopus database during the period of the years 2018-2022, followed by Peru and Cuba with 50 and 19 documents respectively.

The article "Self-efficacy and positive youth development: a narrative review of the literature" (From Rezende Franco & Rodrigues, 2018) places main emphasis on the importance of maintaining in young people "satisfactory self-efficacy beliefs" that (From Rezende Franco & Rodrigues, 2018) will allow them to achieve a healthy life and with that their development in all areas since it mainly seeks to "discuss the relationships between self-efficacy beliefs and development resources in different social domains" (From Rezende Franco & Rodrigues, 2018). A search was carried out in different databases finding 19 documents related to the self-efficacy and positive development of young people of which "academic, physical, professional and social support skills" were highlighted. Individually, self-efficacy and academic performance" (From Rezende Franco & Rodrigues, 2018)

At this point, it is important to note that the preparation of scientific publications in many cases is carried out from collaborations that may involve private and/or public institutions from one or more countries. Therefore, the same publication can be linked to one or more authors with different nationalities and thus to more than one country simultaneously, being part of the total number of articles or publications of each of them in the final sum. Next, in Figure 5, you will see in greater detail the flow of collaborative work carried out by several countries.

Figure 5. Co-citations between countries.



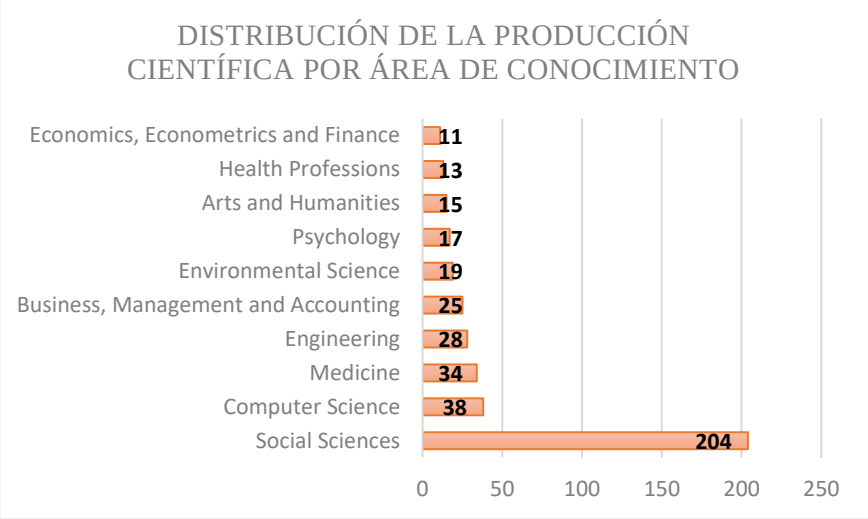
Source: Own elaboration (2023); based on data provided by Scopus.

Figure 5 shows the grouping of research according to the collaboration between authors belonging to various international institutions. There is evidence of outstanding participation among authors affiliated with institutions in Latin American countries such as Spain, Brazil, Chile, Colombia, Mexico, Cuba, Ecuador, Argentina, Peru with the United States and Portugal.

4.4 Distribution of scientific production by area of knowledge

Figure 6 shows the distribution of the elaboration of scientific publications from the area of knowledge through which the different research methodologies are implemented.

Figure 6. Distribution of scientific production by area of knowledge.



Source: Own elaboration (2023); based on data provided by Scopus.

Due to the nature of our variables and their importance in the acquisition of research skills and improvement of their analytical capacity, it is not surprising that most of the publications found in the Scopus database are made from the social sciences occupying the main position in the publication of documents. Other areas such as computer science as well as medicine have contributed to the study of these variables, publishing 38 and 34 papers each.

As we can see in Figure 6, the variables object of this study are relevant in various areas of knowledge, since they positively impact the training of new researchers that will guarantee access to relevant information to future generations.

4.5 Type of publication

In the following graph, you will observe the distribution of the bibliographic finding according to the type of publication made by each of the authors found in Scopus.

Figure 7. Type of publication.

Source: Own elaboration (2023); based on data provided by Scopus.

Figure 7 clearly shows that the predominant type of publication in the study of Student Scientific Production and Writing was the journal article with a total of 213 documents, followed in second and third place by the reviews with 42 publications and conference proceedings with 30.

Another important article was the so-called "Analysis of research culture and scientific production in a national university" in (Carhuancho, Flores, Mendivel, Nolazco, & Venturo, 2020) which the presence of competences or research culture in students is studied, obtaining as a result a negative figure since teachers are limited to sharing "theoretical and practical knowledge linked to professional training" (Carhuancho, Flores, Mendivel, Nolazco, & Venturo, 2020) for not considering research as a "profitable activity". (Carhuancho, Flores, Mendivel, Nolazco, & Venturo, 2020) Despite this, the interest of a part of the educational community to acquire knowledge related to scientific research is observed, but in an isolated way, so that satisfactory results have not yet been obtained.

Conclusions

After the bibliometric analysis carried out in the present research work, it was established that Spain was the country with the highest number of records published for the variables s Student Scientific Production and Writing with a total of 234 publications, in the Scopus database during the period 2018-2022 and that the area of knowledge with the greatest contribution wasthe social sciences with 204 texts.

It is necessary to emphasize that most of the publications found in the database are based on the study of Scientific Production and Writing really the number of documents that allows us to determine which are the Factors that contribute to this is much lower so we consider that there is a lack in the elaboration of texts that cover this subject.

On the one hand, it is possible to determine that greater influence is needed by the teaching team in the training of new researchers since they consider that this is an exhausting task so they prefer not to include research in their educational programs and much less consider it as an evaluation instrument which in other words means that they make use of traditional teaching approaches in which the student obtains purely theoretical without taking into account whether the application of such knowledge in everyday life can be carried out.

Additionally, it was observed that in cases in which professors encouraged research, the process reached the presentation of said document as an evaluation of the subject and did not proceed with the publication of said text in a journal or in some medium where it was visible and contributed to the deepening on some topic in particular, so it is considered that "in the university environment there is a deficiency in achieving the stimulation so that research ends up being published and that, on the contrary, a culture of "research, but not publish" is stimulated" (Castro Rodriguez, 2019)

On the other hand, there is no doubt that the interest in research finally depends on fully personal factors that lead the student to want to know more about a topic or problem in particular, so it begins the search for relevant information within which you can identify problems or negative issues related to your object of study and that consequently arouse your interest in finding a solution or let's say that Achieve a kind of contribution in their environment regarding this theme. In general, students who decide to write and publish articles or scientific documents achieved it thanks to their involvement in "a scientific society, study groups, having participated in competitions, attended congresses, organizing scientific events, taking scientific writing courses and having been recognized by their teachers positively influence a greater scientific production " (Corrales Reyes & Dorta Contreras, Scientific production in Latin American student journals: comparative analysis of the period 2013-2016, 2019)

For all of the above and with the sole objective of continuing to raise awareness of the importance of guaranteeing access to this type of information in a transparent way by anyone, we hope to encourage with this article the participation of scientific communities in the study of these variables from any scientific profile and area of knowledge always seeking to provide more alternatives that contribute to the investigation of topics of interest general.

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