Scientific production of the RENACYT researchers from the public universities of the Peruvian Amazon in the Scopus database

Producción científica de los investigadores RENACYT de las universidades públicas de la Amazonía peruana en la base de datos Scopus

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Abstract

The objective of this research was to analyze the scientific production of RENACYT researchers from public universities in the Peruvian Amazon in the Scopus database. The research was bibliographical, retrospective and descriptive and included 114 teachers who were designated as RENACYT Researchers by the National Council of Science, Technology and Technological Innovation of Peru (CONCYTEC). The scientific production of these teachers was identified through the search of their publications registered in the Scopus database. According to the results, it was determined that RENACYT researchers from the Universidad Nacional de la Amazonía Peruana - UNAP had a greater number and variety of publications in Scopus (586) followed by teachers from the Universidad Nacional Amazónica de Madre de Dios - UNAMAD (106). Similarly, the main types of publications were identified as original articles, conference abstracts, data articles, and letters to the editor. On the other hand, it was found that there were RENACYT researchers belonging to 4 of the 5 universities that did not have any publication in Scopus. Finally, it was concluded that the scientific production of RENACYT researchers was limited in 4 of the 5 targeted universities, so it was necessary to establish policies and mechanisms to promote the publication of the research they carry out, especially in journals with greater impact and indexed. in databases such as Scopus.

Keywords: Scientific production, research professor, RENACYT, Scopus, publication.

Resumen

El objetivo de la presente investigación fue analizar la producción científica de los investigadores RENACYT de las universidades públicas de la Amazonía peruana en la base de datos Scopus. La investigación fue bibliográfica, retrospectiva y descriptiva que incluyó a 114 docentes que fueron designados como Investigadores RENACYT por el Consejo Nacional de Ciencia, Tecnología e Innovación Tecnológica del Perú (CONCYTEC). La producción científica de dichos docentes fue identificada a través de la búsqueda de sus publicaciones registradas en la base de datos Scopus. De acuerdo a los resultados, se determinó que los investigadores RENACYT de la Universidad Nacional de la Amazonía Peruana – UNAP tenían una mayor cantidad y variedad de publicaciones en Scopus (586) seguida de los docentes de la Universidad Nacional Amazónica de Madre de Dios – UNAMAD (106). Del mismo modo, se identificó que los principales tipos de publicaciones fueron los artículos originales, resúmenes de congreso, artículos de datos y cartas al editor. Por otro lado, se halló que existían investigadores RENACYT pertenecientes a 4 de las 5 universidades que no contaban con ninguna publicación en Scopus. Finalmente, se concluyó que la producción científica de los investigadores RENACYT era limitada en 4 de las 5 universidades focalizadas por lo que era necesario establecer políticas y mecanismos que permitan promover la publicación de las investigaciones que ellos realizan, especialmente en revistas con mayor impacto e indexadas en bases de datos como Scopus.

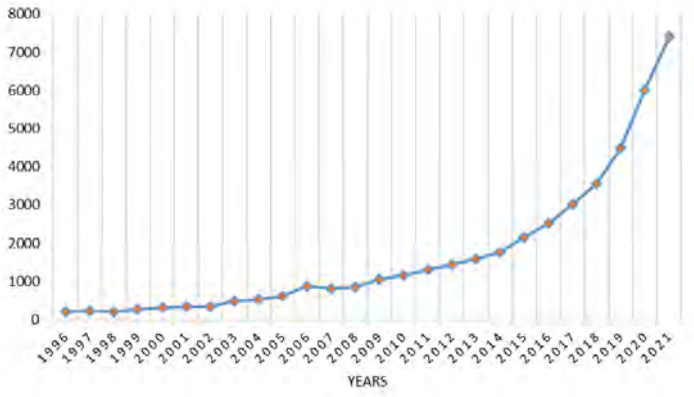
Palabras clave: Producción científica, docente investigador, RENACYT, Scopus, publicación.

Introduction

During the last decades, research has been considered as a fundamental aspect for the social and economic development of a society[1]. In this sense, universities have the responsibility to promote a research culture throughout the university community[2] to increase the quantity and quality of scientific production generated by[3]. This is how many countries, aware that without research there is no development, have a remarkable scientific production in important databases, such as Scopus. According to Scimago Journal & Country Rank[4], China, the United States, the United Kingdom, India and Germany are the countries with the highest accumulated scientific production in Scopus[5]. In the case of Latin America, scientific production has been increasing in recent years, however, it is still limited compared to the developed countries mentioned above, mainly due to the low investment they make in research[6].

In Peru, since the enactment of University Law 30220 in 2014, most universities have also been promoting scientific research in the educational community[7], since it plays a relevant role in the progress of a country through the generation of knowledge, technological development and the solution of local and national problems, mainly[8]. The above is consistent with what was reported by the Scimago Journal & Country Rank[4], which shows that scientific production suffered a sustained and significant growth, precisely, from 2014 to the present, reaching a total of 7,420 documents in 2021 (Figure 1). However, the number of documents published in Peru is still insufficient compared to the most competitive Latin American countries such as Brazil, Chile, Mexico, Colombia and Argentina[9,10].

Figure 1. Peruvian scientific production in the Scopus database



Within the reforms established in the University Law 30220 regarding research are the greater financing of research projects, the promotion of the development of patents and the appointment of research professors, an aspect on which this study will focus. To be considered research professors, they must have been qualified and designated, after an evaluation of their academic and scientific production, in the National Scientific, Technological and Technological Innovation Registry (RENACYT)[11]. So, researchers are called those people who with their work contribute to achieving new scientific knowledge at its different levels of conception, as well as those dedicated to the improvement and generation of technologies and processes. There are some attraction policies for these researchers, in the case of working in a public university and being appointed, among which stand out the dictation of a single course per year and the allocation of a special bonus equivalent to 50% of their salary[12]. In other words, it is sought that they focus their attention, dedication and efforts mainly on research and the generation of knowledge and innovation with the purpose of contributing to the solution of local and national problems.

Now, they could be classified into two groups, according to their dedication: María Rostworowski (made up of professionals dedicated to generating original knowledge and innovations through research) and Carlos Monge Medrano (made up of professionals with outstanding dedication and mainly oriented to research and technological development)[13]. However, some criteria used to classify researchers were questioned by many leading researchers and specialists in the field because they were not rigorous on certain points.

By virtue of the foregoing, in 2021 the regulations were updated and included a new classification of RENACYT researchers in 8 levels, making it more complex to reach the highest level, called "Distinguished Researcher", because it requires holding the academic degree of Doctor, have a high production of scientific articles in the Scopus, Web of Science or Scielo databases, have intellectual property records, have an H Index equal to or greater than 10, as well as having been an undergraduate thesis advisor or postgraduate[14]. Currently, 90.2% of researchers maintain the old classification because they are not yet encouraged to be recategorized because they could lower their level or lose their designation[15].

In Peru, there are no studies that have investigated the scientific production in the Scopus database of RENACYT researchers, so this research wants to explore the reality in which the universities of the Peruvian Amazon find themselves so that, depending on based on the findings, institutional policies can be designed that encourage research leadership by RENACYT researchers, as well as the scientific publication of their results in high-impact databases, such as Scopus or Web of Science. Therefore, the objective of this research was to analyze the scientific production of RENACYT researchers from public universities in the Peruvian Amazon in the Scopus database.

Material and methods

Project

The research was characterized by being bibliometric and retrospective[16], where the scientific production was described in the Scopus database of teachers qualified as RENACYT researchers and who were affiliated with 1 of the 5 public universities located in Loreto, Ucayali and Madre de Dios, regions belonging to the Peruvian Amazon: Universidad Nacional de la Amazonía Peruana (UNAP), the Universidad Nacional Autónoma de Alto Amazonas (UNAAA), the Universidad Nacional Intercultural de la Amazonía (UNIA), the Universidad Nacional de Ucayali (UNU), and the Universidad Nacional Amazónica de Madre de Dios (UNAMAD). It is necessary to specify that the Scopus database was chosen because it has a wide and multidisciplinary coverage of journals, a standardized impact registry and bibliometric tools that allow quick and efficient filtering and analysis[17].

According to Table 1, of the total number of RENACYT researchers, 48.3% were from UNAP, 18.4% from UNAMAD, 14% from UNIA, also 14% from UNU and 5.3% from UNAA. Regarding gender, 74.6% were men and 25.4% women. Regarding the research group, 61% belonged to the Carlos Monge Medrano group and 39% to María Rostworowski.

Table 1. Sample characteristics

Characteristics	n= 114	%
Universities		
UNAP	55	48.3
UNAAA	6	5.3
UNIA	16	14.0
UNU	16	14.0
UNAMAD	21	18.4
Gender		
Male	85	74.6
Female	29	25.4
Research group		
María Rostworowski	65	39.0
Carlos Monge Medrano	49	61.0

Procedure

Initially, researchers recognized by RENACYT were identified and consolidated in a database for each university. Subsequently, a search was made for each of them in the Scopus database, where information was retrieved on their scientific production (quantity, types of documents published and their H index). To perform the statistical analysis, it was necessary to use the Microsoft Excel program, in which the data was systematized and the tables and figures were prepared for a better interpretation.

Ethical aspects

In the present investigation there was a minimal risk, since no intervention was carried out, no patient data or biological samples were obtained and the information retrieved is in the public domain, for which it was not necessary to request the authorization of an Institutional Ethics Committee. Finally, the authors guarantee the confidentiality of the information obtained, which will not be used for purposes other than the development of this work.

Results

According to Figure 2, a total of 816 documents published by the RENACYT researchers were identified, of which 586 belonged to the UNAP, 106 to the UNAMAD, 55 to the UNAAA, 49 to the UNIA, and 20 to the UNU. As can be seen, production was considerable only at UNAP, while it was low at the remaining 4 universities.

Figure 2. Scientific production of RENACYT researchers by university

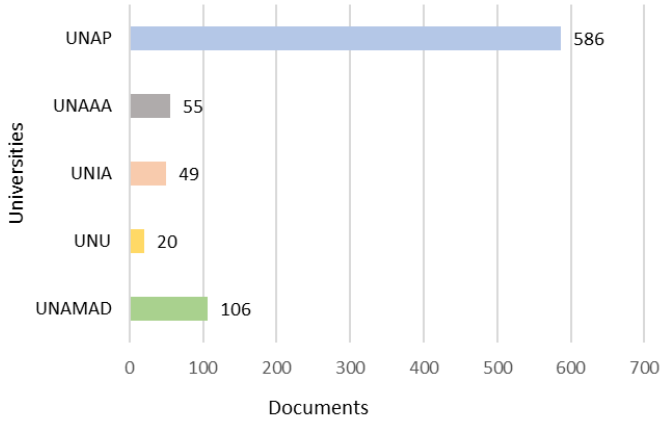


Table 2 shows that the RENACYT researchers with the greatest scientific production were Casapia Morales, Wilfredo Martin, affiliated with UNAP with 82 documents and an H-Index of 30; Arévalo Lopez, Luis Alberto, affiliated with UNAAA with 17 documents and a H-Index of 6; Sánchez Choy Sánchez, José Gerardo, affiliated with the UNIA with 9 documents and an H-Index of 4; Villegas Panduro, Pablo Pedro, affiliated with the UNU with 5 documents and an H-Index of 2 and Huamantupa Chuquimaco, Isau, affiliated with UNAMAD with 32 documents and an H-Index of 17.

Table 2. RENACYT researchers with the greatest scientific production in Scopus

University	Researchers	Documents	H Index
UNAP	Casapia Morales, Wilfredo Martin	82	30
UNAP	Rodríguez Ferrucci, Hugo Miguel	37	19
UNAP	Del Águila Pasquel, Jhon	30	14
UNAAA	Arévalo López, Luis Alberto	17	6
UNAAA	Arévalo Gardini, Enrique	15	8
UNAAA	Chu Koo, Fred William	11	8
UNIA	Sánchez Choy Sánchez, José Gerardo	9	4
UNIA	Ortega Chávez, Wilmer	8	1
UNIA	Sotero Solís, Víctor Erasmo	7	5
UNU	Villegas Panduro, Pablo Pedro	5	2
UNU	Panduro Pisco, Grober	5	1
UNU	Tuisima Coral, Lady Laura	4	3
UNAMAD	Huamantupa Chuquimaco, Isau	32	17
UNAMAD	Garate Quispe, Jorge Santiago	10	4
UNAMAD	García Roca, Mishari Rolando	8	2

According to Table 3, RENACYT researchers were characterized by more frequently publishing original articles, conference abstracts, data articles and letters to the editor. It is necessary to highlight that, in the case of UNAP, in addition to presenting a greater scientific production, it was more di-

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verse, since its professors published documents that were not reported in the other universities, such as data articles and book chapters. On the other hand, the UNU presented a smaller quantity and variety of scientific production, since they only published original articles and reviews.

Table 3. Scientific publication of RENACYT researchers according to type of document

Type	UNAP		UNAAA		UNIA		UNU		UNAMAD	
	n	%	n	%	n	%	n	%	n	%
Original article	516	88.1	51	92.7	43	87.8	19	95.0	100	94.3
Review	8	1.4	0	0.0	0	0.0	1	5.0	2	1.9
Note	1	0.2	0	0.0	0	0.0	0	0.0	2	1.9
Proceeding paper	22	3.8	3	5.5	5	10.2	0	0.0	0	0.0
Letter to the editor	13	2.2	0	0.0	0	0.0	0	0.0	1	0.9
Editorial	1	0.2	0	0.0	1	2.0	0	0.0	0	0.0
Data paper	17	2.9	0	0.0	0	0.0	0	0.0	0	0.0
Book chapter	5	0.9	0	0.0	0	0.0	0	0.0	0	0.0
Erratum	3	0.5	1	1.8	0	0.0	0	0.0	1	0.9
Total	586	100.0	55	100.0	40	100.0	20	100.0	106	100.0

As can be seen in Table 4, there were teachers who, despite having been qualified as RENACYT researchers, did not have publications in the Scopus database. In this sense, more teachers with these characteristics were detected at UNU (62.5%), UNIA (18.8%) and UNAMAD (14.3%).

Table 4. RENACYT researchers without any scientific publication in Scopus

University	Researchers Renacyt	Researchers without any scientific publication	%
UNAP	55	6	10,9
UNAAA	6	0	0,0
UNIA	16	3	18,8
UNU	16	10	62,5
UNAMAD	21	3	14,3

Discussion

Currently, Peruvian universities are developing scientifically and academically from the enactment of University Law 30220 and the establishment of the National Superintendence of Higher University Education (SUNEDU). To contribute to the development of research and increase the scientific production of the universities, RENACYT researchers were appointed, however, it has been identified that there are some who do not have publications in important databases and others only do so, but in predatory magazines. Therefore, this research analyzed the scientific production of RENACYT researchers from public universities in the Peruvian Amazon in the Scopus database.

A first finding indicates that the scientific production indexed in Scopus by RENACYT researchers from the 5 universities of the Peruvian Amazon reaches 816 documents. Of the total, UNAP has 586 indexed documents (71.8%), far exceeding the other universities. In this sense, at a general level, it is observed that the production in 4 of the 5 universities in the Amazon focused on this research is low, which coincides with what was reported by in the third report on the university reality in Peru, which indicates that, in the Peruvian Amazon, only 5.9% of teachers registered any publication in a journal indexed in Scopus or Web of Science, which would be explained by the fact that there were few RENACYT researchers compared to the Peruvian Coast or Sierra and because the majority of universities studied have only a few years of creation.

Another finding shows that RENACYT researchers were characterized by more frequently publishing original articles, conference abstracts, data articles and letters to the editor. The exposed result coincides with that reported by a study carried out in Peru, where it was sought to evaluate the scientific production of the University of San Martín de Porres (USMP) between the period 1995-2020 and it was determined that 67.7% of the publications indexed in Scopus were original articles while 18.6% were letters to the editor[18]. In the same way, it coincides with another study also carried out in Peru, whose purpose was to analyze the scientific production of the rectors of licensed Peruvian universities and determined that 66.7% of the scientific production corresponded to original articles, while 20% to conference articles. Likewise, 68.9% of the total were publications indexed in Scopus and 31.1% indexed in Web of Science[19].

On the other hand, some researchers were identified who, despite having been classified as RENACYT researchers, did not have publications in the Scopus database. These cases were detected in the UNU (62.5%), UNIA (18.8%) and UNAMAD (14.3%) and were due to the fact that the old CONCYTEC regulations were not very demanding, however, according to current regulations, to be designated as a RENACYT researcher, it is required to have publications (original articles or reviews) in Scopus or Web of Science, which requires researchers to publish in journals indexed in the aforementioned databases. This in turn will improve the visibility and positioning of universities.

Having RENACYT researchers has been very favorable for universities, since in many cases they increased their scientific production and managed to graduate. Said licensing process was very relevant and decisive, since it was a mandatory procedure for all Peruvian universities through which they demonstrated that they met basic quality conditions to be able to provide the educational service.

Conclusion

It was concluded that RENACYT researchers from the National University of the Univesidad Nacional de la Amazonía Peruana - UNAP had a greater number and variety of publications in Scopus (586) followed by teachers from the Universidad Nacional Amazónica de Madre de Dios - UNAMAD (106). Similarly, the main types of publications were identified as original articles, conference abstracts, data articles, and letters to the editor. On the other hand, it was found that there were RENACYT researchers belonging to 4 of the 5 universities that did not have any publication in Scopus, which is a cause for concern. Therefore, it is necessary to promote institutional policies that promote the financing and publication of research carried out in high-impact scientific journals and preferably indexed in Scopus.

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