

# Inclusive education and remote education in rural areas of northern Peru

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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 variable Inclusive education and remote education in rural areas of northern Peru. The purpose of the bibliometric analysis proposed in this document, is to know the main characteristics of the volume of publications registered in Scopus database during the period 2016-2020 in Latin American countries, achieving the identification of 15 publications. The information provided by said platform was organized by means of 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 by means of a qualitative analysis. Among the main findings of this research, Brazil, with 6 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 inclusive education and remote education was social sciences with 11 published documents, and the type of publication that was most used during the above-mentioned period was the journal article, which represents 93% of the total scientific production.

**Keywords:** inclusive education, rural areas, Latin America.

## 1. INTRODUCTION

Inclusive education aims to implement educational models that can be adapted to each community and to the needs of each student, promoting learning and making education accessible to young people and children who do not have the resources or have difficulties to continue with their training process; therefore, inclusive education is an important tool in the education of rural communities since they have different difficulties than those in urban areas, thus allowing to adapt the learning processes

depending on the needs that arise in a given community.

Remote education is presented as a good strategy for rural communities to have access to quality education by being able to attend classes even when they are not physically present due to transportation difficulties or not having the possibility of going to the schools.

With these two concepts, inclusive education and remote education, also arises the analysis of several problems that make difficult the

implementation of these measures in rural areas of Peru and Latin America in general, the most prominent is the digital divide that exists in rural communities since in most of these there is not a good internet connection or do not have the necessary digital tools to access online education. In the thesis entitled “Implementing wireless networks through fiber optics to promote education in rural areas of Peru”(Flores, Paredes Pinto, Roldan Tunjar, & Valdizan Guevara, 2021), the authors present a project to help rural communities in Peru to have access to a quality internet connection, taking into account the urgency of its implementation due to the pandemic that started in 2020 and forced the restructuring of educational methodologies and the use of remote education to continue with the pedagogical processes.

Alva Estrada, in his thesis entitled “Challenges of rural single-teacher education in times of National Sanitary Emergency: the case of the Huanchay district” (2021), presents the challenges faced in the implementation of remote education as a tool for inclusive education in rural areas of Peru, these challenges are connectivity, technological resources, ICT strategies and digital skills of students and teachers in order to implement innovative strategies in education that aim that people located in rural communities can have a quality education through digital tools as a mechanism for inclusion. Therefore, it is necessary to evaluate the strategies that have been implemented in order to make possible an inclusive education in rural areas, thus guaranteeing the same opportunities and level of knowledge of urban communities. Thus, it is

important to know in terms of bibliographic resources, the current state of research on inclusive education and remote education in rural areas, so a bibliometric analysis of the scientific production registered in the Scopus database during the period 2015-2020 is proposed to answer the question: How has been the production and publication of research papers related to the study of inclusive education and remote education in rural areas during the period 2015-2020?

## 2. General Objective

To analyze from a bibliometric and bibliographic perspective, the production of high impact research papers on the variable Inclusive education and remote education in rural areas during the period 2015-2020.

## 3. Methodology

Quantitative analysis of the information provided by Scopus under a bibliometric approach on the scientific production related to inclusive education and remote education in rural areas is carried out. Also, from a qualitative perspective, examples of some research papers published in the area of study mentioned above are analyzed from a bibliographic approach to describe the position of different authors on the proposed topic.

The search is performed using the tool provided by Scopus and the parameters listed in Table 1 are established.

### 3.1 Methodological design

Table 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 15 publications were identified	Published papers whose study variables are related to inclusive education and remote education in rural areas. Research papers published during the period 2015-2020. Limited to Latin American

			countries. Without distinction of area of knowledge. Without distinction of type of publication
<b>PHASE 2</b>	CONSTRUCTION OF ANALYSIS MATERIAL	The information identified in the previous phase is organized. The classification will be made by means of 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
<b>PHASE 3</b>	DRAFTING OF CONCLUSIONS AND FINAL DOCUMENT	After the analysis carried out in the previous phase, the conclusions are drawn up and the final document is prepared	

Source: Own elaboration (2021)

4.1 Co-occurrence of words

4. Results

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

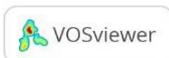
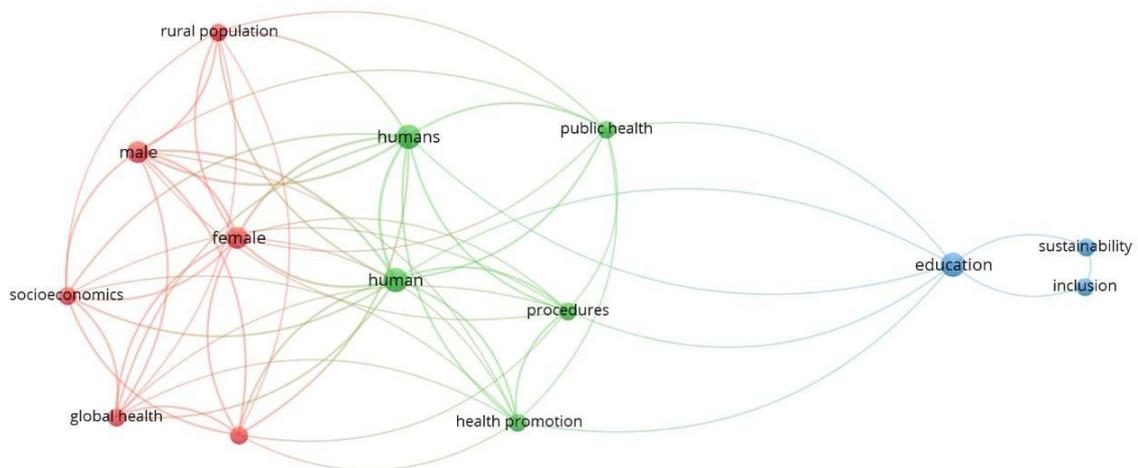


Figure 1. Co-occurrence of words

Source: Own elaboration (2021); based on data provided by Scopus.

Education, sustainability and inclusion are one of the keywords most used in research related to the variables under study when referring to the methodologies designed to make education more inclusive which allows accessibility to all people at a quality level through responsible actions both with the development of the community and the environment, ensuring the sustainability of educational processes and seeking to ensure accessibility to communities with difficult access such as rural communities which have difficulties of connectivity and use of digital tools, which generates lower levels of learning than those recorded in urban communities. Therefore, remote education as an inclusion strategy would help to strengthen the social fabric and reduce the inequality gaps that exist in education. Rural population and socio-economics are other key words that are related to the opportunities that remote education brings to rural communities, since by helping the majority of people to access education, it offers more training opportunities for the labor market, which generates greater economic development in the most remote areas of the country.

#### 4.2 Distribution of scientific production by year of publication

Figure 2 shows how the scientific production is distributed according to the year of publication, taking into account the period from 2015 to 2020.

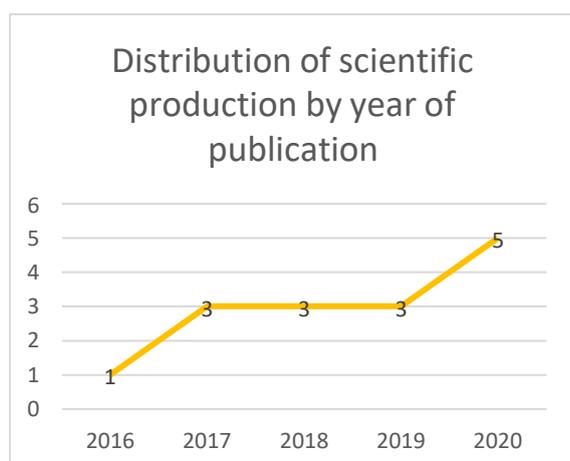


Figure 2. *Distribution of scientific production by year of publication.*

Source: Own elaboration (2021); based on data provided by Scopus.

2020 is the year with the highest number of publications related to the variables under study, with a total of 5, including the article entitled “A look from the inclusion of the School Integration Program (PIE) in Chilean rural schools: A case analysis” (Núñez-Muñoz, Peña-Ochoa, González-Niculcar, & Ascorra-Costa, 2020), where the school inclusion program is analyzed, which seeks to offer quality education to children with special needs, so its implementation in rural areas is equally important. In this study, 6 educational institutions in rural areas of Chile are analyzed, finding that only one of them has school inclusion policies in accordance with the program. Therefore, it is concluded with the need to monitor the implementation of this program in educational institutions in rural areas so that the greatest number of people can have access to education. For three consecutive years the production of documents was maintained, registering 3 publications in 2017, 2018 and 2019 and in 2016 a document was registered in Scopus.

#### 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.

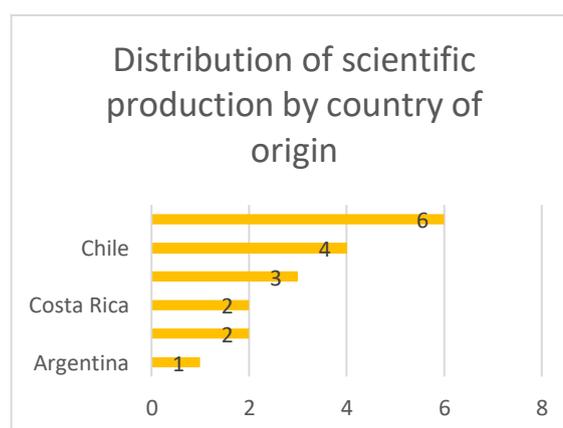


Figure 3. *Distribution of scientific production by country of origin.*

Source: Own elaboration (2021); based on data provided by Scopus.

Brazil is the country with the highest number of registered publications, with a total of 6 publications, among which we can identify “Special education service: Reflections on the demand for enrolled students and the supply of multifunctional resource classrooms in the municipal network of Manaus-AM” (dos Santos, Matos,, Sadim, da Silva, & Faianca, 2017). This research analyzes the Multifunctional Resource Classrooms (MRC), as a space of Special Education Service, mapped in the Municipal Network of Manaus, in order to understand how these services are being organized in compliance starting with a literature review to the policies implemented in educational inclusion programs in rural communities in Brazil and secondly analyzing data collected by the supervisory entities to schools in order to determine the effectiveness in the implementation of these programs. It was

found that although there has been an increase in the number of children and young people with special needs, no more places have been opened for this community, showing a deficit in the implementation of these programs.

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 from 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.

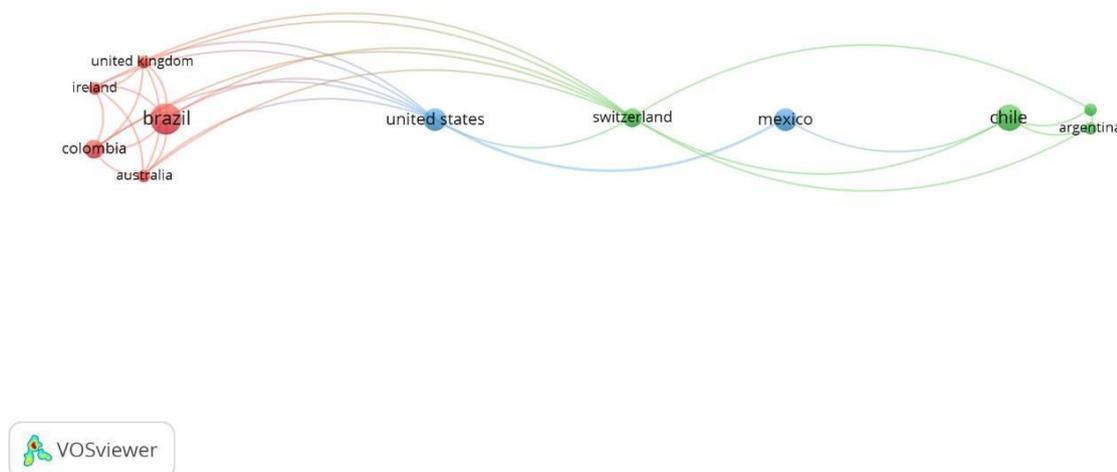


Figure 4. *Co-citations between countries.*

Source: Own elaboration (2021); based on data provided by Scopus.

As mentioned above, Brazil is the country with the greatest contribution to research related to the variables under study, having publications with authors affiliated to institutions from countries outside Latin America, such as

Australia, Ireland and the United Kingdom, demonstrating the interest of different countries regarding the state of research on educational inclusion and remote education in Latin America. Mexico and Chile also present

publications in co-authorship with Switzerland and the United States, among these publications is “Monitoring inclusive education in Chile: differences between urban and rural areas” (Chávez, Martínez, & Hernández, 2020) This study considers the differences between inclusive education in urban and rural areas, using surveys of inclusive program coordinators to examine the differences between the coordinators' perception of program performance and the standards defined by public policy. In the analysis of the results, significant differences were found between urban and rural schools in terms of accessibility problems. This leads to the conclusion that public policies do not guarantee that children and youth with special needs in rural areas have access to quality education.

#### 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.

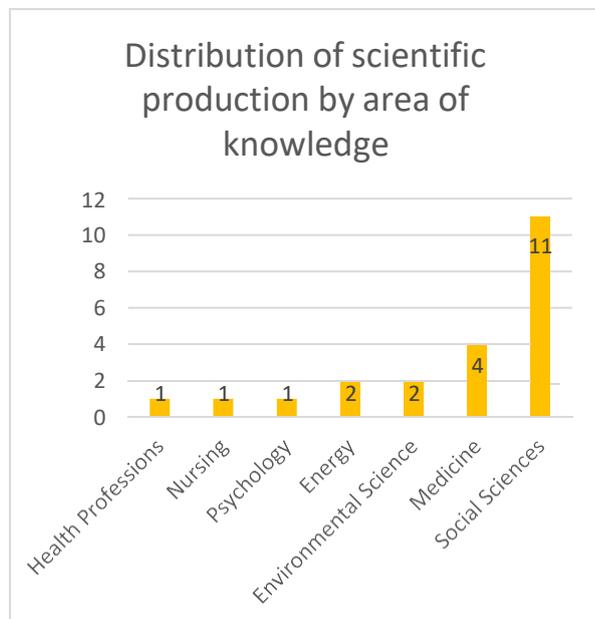


Figure 5. *Distribution of scientific production by area of knowledge.*

Source: Own elaboration (2021); based on data provided by Scopus.

Social sciences 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 inclusive education and remote education in rural areas, with a total of 11 publications in Scopus, among which is the study entitled “Monitoring inclusive education in Chile: differences between urban and rural areas”(Tamayo, Rebolledo, & Besoain-Saldaña, 2017), where an observational, analytical and cross-sectional study was conducted in which inequality gaps in inclusive education between rural and urban areas were presented, since the same policies are not used in rural communities, which translates into the deficient provision of education to students with different abilities, making it necessary to implement educational inclusion programs in Latin American rural communities. In second place is medicine with 4 publications in total, followed by environmental sciences with 2, energy with 2 and psychology, nursing and health professions with 1 publication each.

#### 4.5 Type of publication

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

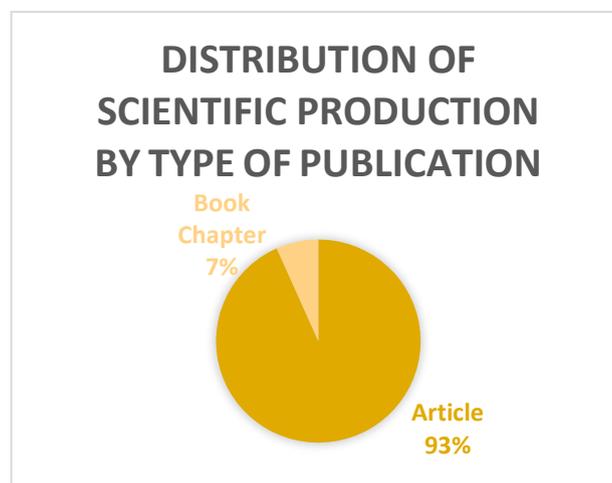


Figure 6. *Distribution of scientific production by type of publication*

Source: Own elaboration (2021); based on data provided by Scopus.

As shown in Figure 6, within the different types of publications, 93% of the total number of documents identified through Phase 1 of the Methodological Design, correspond to Journal Articles, among which is the one entitled "Indigenous populations of Costa Rica and their access to higher education. Rural Education Division: A training alternative" (Carvajal-Jiménez V. aSend mail to Carvajal-Jiménez V., 2017). In this research, the author analyzes the historical and operational evolution of inclusive actions in education aimed at the indigenous populations of Costa Rica, one of the most vulnerable and discriminated groups in this country. A review is made of the barriers to access the university environment, as well as the role of public universities in the democratization of higher education so the progress that has been made in inclusive education is evidenced but clarifying that there is still a long way to go to create more educational offerings for this vulnerable community. In second and last place are the book chapters with 7% of the publications identified in this study.

## 5. Conclusions

Thanks to the bibliometric analysis proposed in this research, it can be determined that Brazil is the Latin American country with the largest number of bibliographic records in Scopus database during the period between 2015 and 2020 with a total of 15 documents. The scientific production related to the study of Inclusive education and remote education in rural areas, has presented an important growth during the period previously indicated, going from 1 publication in 2016 to 5 units in 2020, that is, it was possible to increase the creation of bibliographic records in a period of 5 years, which indicates the importance that inclusive education represents in the adequacy of quality education to rural communities in order to offer greater opportunities to children and young people in these communities.

Remote education has become the most effective tool in inclusive education as it allows access to educational processes at any time

from anywhere in the world, promoting education even if it does not take place physically: so remote education helps to make education more accessible to people living far from urban centers. With these innovations there are also several difficulties in its implementation, the most outstanding is the digital divide that exists in rural areas of Latin America since most of them lack good connectivity or digital tools and knowledge of digital skills, i.e., there is a digital illiteracy that makes it difficult for people to access this type of education. Although several difficulties are presented, it is possible to clarify that public policies are increasingly aimed at minimizing these inequality gaps between these communities in order to offer the same opportunities to people with different needs living in rural areas. All of the above allows this article to conclude, highlighting the importance of knowing the theory or bibliographic resources that seek to awaken the interest in organizations, to implement programs that are aimed at the educational inclusion of people with different abilities living in rural areas of difficult access, turning education into an equal and quality service. That is why it is necessary to highlight the need for studies such as the one presented in this document, which make a tour of those texts that address the aforementioned topic, in order to give the reader a broad view of the current situation of the literature on inclusive education and remote education in rural areas.

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