

Current State of Geography: A Review for Educational Institutions in Choco, Colombia

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Abstract

A documentary review of the current state of Geography as a subject matter taught in Social Sciences programs in Chocó, Colombia is carried out in order to measure its impact and relevance in the academic training of professionals in areas related to the Social Sciences. In the same way, it was measured by means of a survey applied to 73 professionals related to this area of knowledge in the department of Chocó, the perceived importance in the execution of subject plans related to Geography in the region, highlighting as main results that 46.6% of respondents are graduates in Social Sciences, 42.5% do not apply the teaching of Geography within the academic content, 28% of respondents work in primary and secondary basic education centers. With the purpose of making a diagnosis regarding the production of scientific documents by the identified academic community, the following findings are obtained: 80.8% do not belong to any research group dedicated to the line of Geography in Chocó, 86.3% have not published scientific papers related to the study of Geography or teaching in this specific area. However, the respondents express the importance and impact of the study of Geography within the academic plans, since 60.3% of the professionals surveyed said that it is very important to manage academic resources to update knowledge about the geographical situation of the region. In this way, an exhaustive search through specialized databases such as Scopus determined the need to encourage research and dissemination of scientific findings concerning Geography as a subject matter within the different levels of training in the department of Chocó.

Keywords: Geography, Geographic Education, Academic Training, Scientific Research, Social Sciences.

1. Introduction

The study of Geography represents a basic theoretical support in the academic formation of areas related to Social Sciences, and in school preparation in such a way that its inclusion in the academic content stopped being a trend or a fashion, to become an imperative need in the knowledge of students, even more so when it is focused on the region where the social, economic and cultural potential of each individual is developed (Gonzalez, 2018).

The study of Geography is characterized by its breadth and diversity because the focus of interest corresponds to a physical space, a geographical environment that is far from the analysis of living beings, molecules, atoms, etc. (Cuadra, 2020). It also focuses on what is known as historical data up to emergent aspects of terrestrial spatiality, which is the main quality of this area of knowledge. At the postgraduate level, it is important to emphasize that the Program of Postgraduate Studies in

Geography was created at the Pedagogical and Technological University of Colombia (UPTC), in collaboration with the Geographic Institute Agustin Codazzi in 1984, through the agreement of December 18, 1981 and the agreements 01 of 1982 and 052 of 1982 of the Directive Council of the EPG and the Superior Council of the UPTC respectively (Rojas, 2021) where, in recognition of the importance in the formation of geographers, the knowledge of governmental institutions was linked to the academic practice and methodology of the university.

In this way, the training in this area has taken a dynamic and updated character because the research lines designed for the generation of new knowledge in Geography have sought to encourage the bibliographic production and its implementation through updated resources, in academic programs at different training levels. Therefore, this paper seeks to know quantitative details of the bibliographic production registered in Scopus database regarding the study of Geography at the academic level and qualitative details referencing research papers already published that allow to build an important bibliographic resource adopting a bibliometric perspective and bibliography that allows to answer the question: How has been the scientific production regarding Geography as academic content within educational institutions in the department of Choco, Colombia?

2. General Objective

To analyze the production of high impact research works of the variable Geography as academic content within the Educational Institutions in Colombia from a bibliometric and bibliographic perspective focused on the current state of this area in the department of Choco.

3. Methodology

A quantitative analysis is made on the data provided by Scopus regarding the production of research papers whose variable includes the study of Geography as academic content within the Educational Institutions in Colombia. The search of the information will be done through the Scopus database by means of the following established parameters:

- ✓ Research works referring to the variable Geography as academic content within the Educational Institutions.
- ✓ Publications from Colombia.
- ✓ Documents published in the Social Sciences
- ✓ Without distinction of year of publication.
- ✓ Without distinction of type of publication.

Once the search filters were applied, 17 scientific documents were identified, which will constitute the working material for the development of this research.

It is also analyzed from a qualitative approach to describe the position of different authors on the subject. Similarly, a survey is applied to identify the perception of professionals in areas related to Social Sciences in relation to the importance of the inclusion of Geography within the programmatic contents and the current state of scientific production in the same line of research.

3.1 Population

The questionnaire was applied to 73 professionals who met the following criteria:

- ✓ School, college or university teachers.
- ✓ Professionals in the area of Geography working in entities that have a Geography profile: IGAC, IAP and CODECHOCÓ.
- ✓ Residents in the department of Chocó, Colombia.

4. Results

4.1 Documentary analysis

In the first instance, the current state of scientific publications registered in Scopus will be presented.

4.1.1 Co-occurrence of words.

Figure 1 shows how the keywords used in the 17 publications identified through Scopus are related to each other, which allows to establish the common themes that these researches deal with.

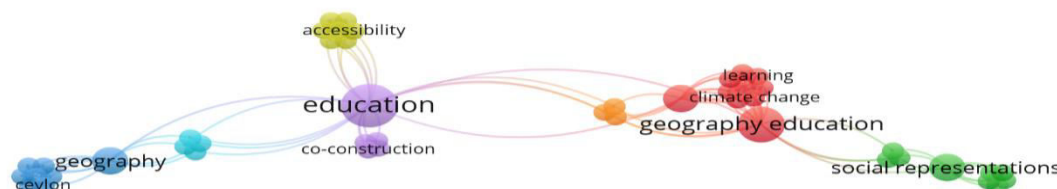


Figure 1. Co-occurrence of words

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

Through the execution of research projects and the publication of the findings, there is a direct relationship between the research that supports the framework of Geography in Education in relation to the current contents that place Geography in the global context with terms such as Climate Change, Social Representation, Learning, so it can be inferred that in the context of education, the area of reference presents current issues known as emerging situations that do not limit their study only to what is established in traditional theories. The term Education is related in the same way with Accessibility, Co-construction, Geography, which indicates that the growth of knowledge about the area of reference is the product of a contribution originating from different disciplines belonging to the Social Sciences.

4.1.2 Distribution of scientific production by year of publication.

Figure 2 shows the volume of publications since the first record in 2005 until the first half of 2021.

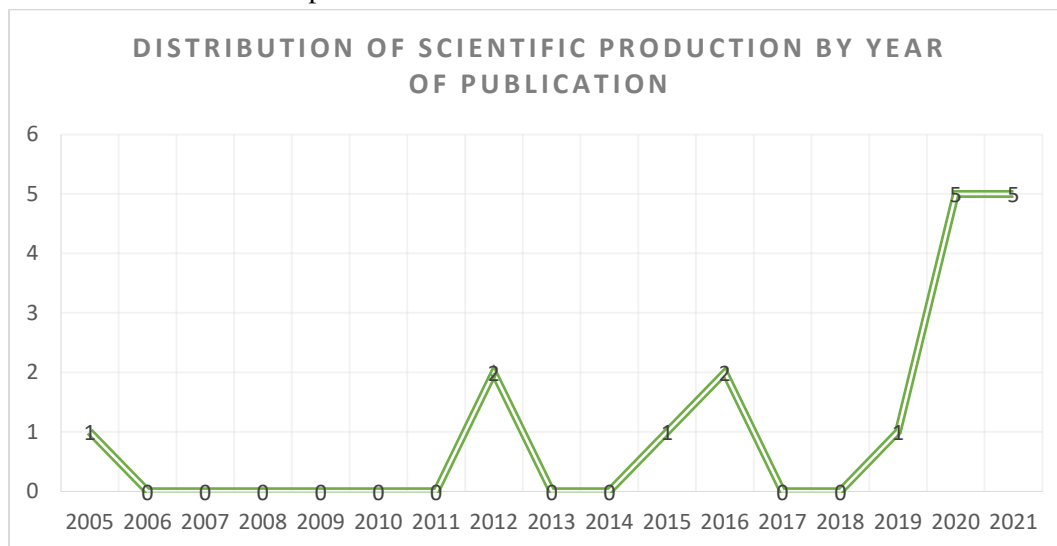


Figure 2. Distribution of scientific production by year of publication.

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

The first registration of a scientific paper in Scopus database referring to Geography as part of academic preparation was in 2005, and it was not until 2012 when two published research papers were registered again in that database. The largest number of publications was registered in the years 2020 and 2021, 5 respectively, however, it should be noted that the analyzed period corresponding to the year 2021 takes into account the first 6 months. Among these is the paper entitled "*Intensive fieldwork experiences as a pedagogical tool for heritage conservation in marginalized cities*", which aims to establish the influence of fieldwork as a pedagogical tool for heritage conservation in marginalized cities (Calderon & Theodossopoulos, 2021), which aims to establish the influence of Geography and Architecture in the field of education in architectural conservation since the latter lacks sufficient theoretical basis to establish a broad debate where positions are contrasted for the sake of growth based on its practice. In this way, the teaching of Geography is founded as a fundamental subject in the construction of theoretical bases for other areas of knowledge through which physical conditions of a territorial nature are explained and their influence on the formation of different emerging areas such as the one cited by the same article.

As can be seen in Figure 2, the total production registered under the parameters established in the methodology applied to this research has not represented a major impact in terms of the volume of publications, since there were very few works published on Geography as academic content within educational institutions.

4.1.3 International collaboration in scientific publications.

Figure 3 shows Colombian authors that developed research projects with the participation of foreign authors.



Figure 3. International collaboration.

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

Figure 3 shows authors from Colombia that participated in scientific publications with authors from other countries, among which Chileans, Danes and Spaniards. An example of this is the article entitled "*La valoración del practicum en la formación inicial: Un estudio de casos internacional en el área de geografía e historia*" (The valuation of the practicum in initial training: An international case study in the area of geography and history) published by (Madalena, Pinheiro, Rodriguez, &

Souto, 2020). which has authors affiliated with institutions in Brazil, Colombia and Spain and whose objective is to evaluate the performance of aspiring teachers through their professional training and knowledge related to Social Sciences such as Geography and History. In this way, the importance of an efficient preparation of knowledge in these areas is determined in order to generate a quality education for students at different academic levels.

At the basic primary and secondary levels, training in Social Sciences is contemplated within the subject plans in the institutions, basing their learning-teaching process on previously established theories as well as the knowledge perceived by pioneering authors in the study of Geography, however, in advanced training levels, such as university and postgraduate, it is common to find proposals that analyze from the current context, related to the physical changes experienced by the earth, which leads to a deep research on the theory learned in early stages of training, and the current conceived from the interpretation of dependent variables whose main influence is the geographical state, such as training in Architecture, some Engineering, Surveying, among others.

4.1.4 Type of publication

Figure 4 shows the distribution of the bibliographic production identified according to the type of publication. It should be noted that the authors, regardless of the area of knowledge in which they specialize, have different types of publication to disseminate their findings, and within the production identified in this paper, the most used ones are referenced in this figure.

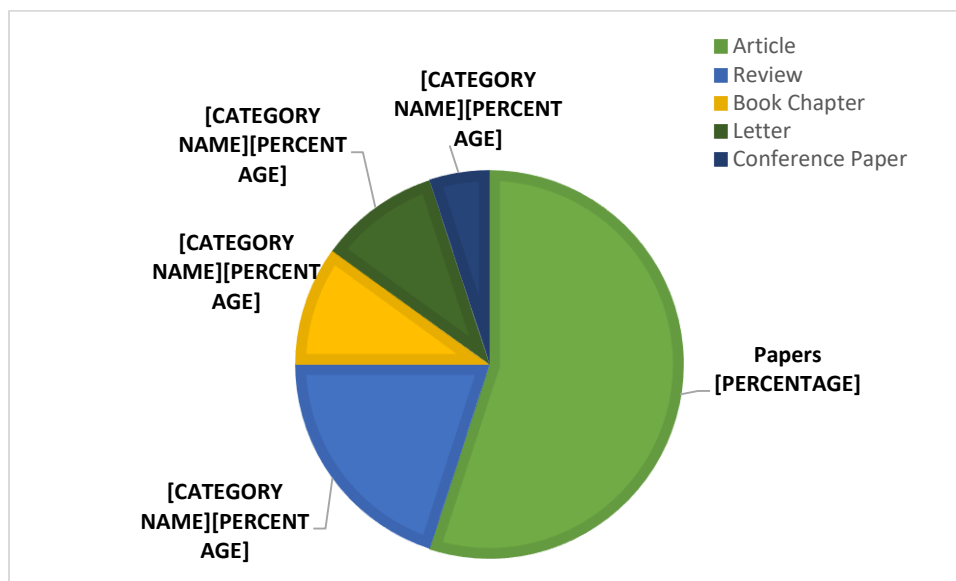


Figure 4. Type of publication.

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

55% of the total production identified corresponds to the modality of Journal Papers, 20% are Reviews, 10% are Book Chapters, 10% are Letters, and finally 5% correspond to Conference Papers.

One the Reviews is the one entitled "Co-designing research on transgressive learning in times of climate change" (Lotz-Sisitka, et al., 2016). which aims to study the epistemological context for the

joint development of a research program on issues related to climate change, food security, water, energy and social justice, and one of the areas of knowledge necessary to carry out the construction not only methodological but conceptual, is precisely Geography, which provides everything related to the physical distribution in the territory, as well as the characteristics of the soil when talking about the changes that currently occur on the land. With regard to the subject of food security, any study carried out on sustainable crops must take into account the use of the soil, analyzing its characteristics for its correct exploitation and reducing its environmental impact (Lotz-Sisitka, Lotz-Sisitka, 2003).

As for the book chapters, the paper that stands out is the one entitled "*Colombia: Development of a prototype of a web-based GIS application for the teaching of geography*" (Rocha & Diaz, 2012) which proposes the use of a technological application to contextualize the students of schools in Colombia, on what is related to the teaching of Geography, highlighting the importance of learning as a Social Science. In this way, the proposal seeks to encourage not only the curricular development of the subject of Geography, but also to awaken the interest of children and young people to learn about it while developing technological skills and abilities.

4.2 Results of the applied survey

Through the design and application of a form applied to 73 professionals related to the teaching process of Social Sciences, specifically Geography, residents in the department of Chocó, to measure their perception of the importance of education in this area for students at different levels of training.

4.2.1 Response to the question: What is your profession?

Figure 5 shows the profession in which the respondents are employed.

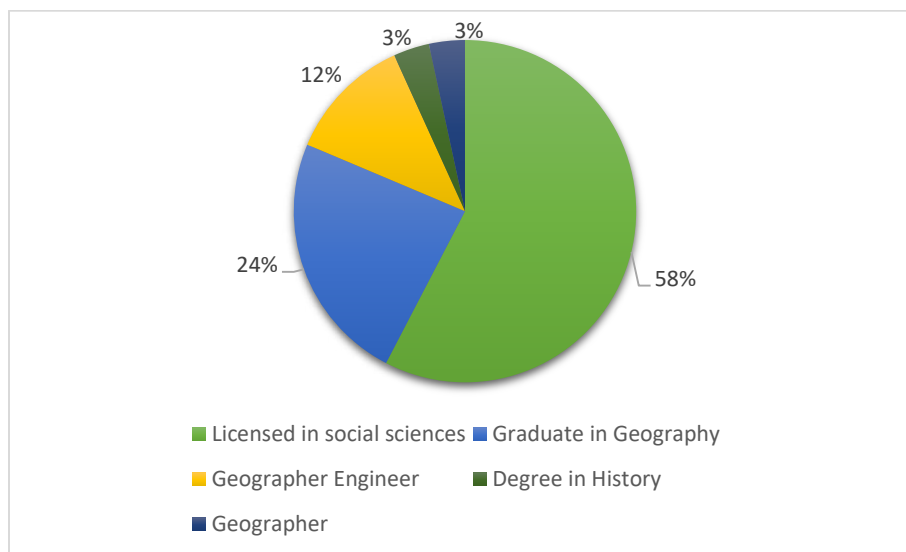


Figure 5. Results to question #1. Profession

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

58% of those surveyed have a degree in Social Sciences, while 28% have a degree in Geography, so it can be deduced that most of the population is aware of the different academic processes by means of which knowledge about this area is imparted to the student population in the department of Chocó. The 12% are Geographic Engineers, and without necessarily being dedicated to education, they can also recognize the importance of the execution of academic plans related to the study of Geography, since their profession is directly related to theories and resources derived from this Social Science.

4.2.2 Response to the question: Does your profession teach or apply Geography?

Figure 6 shows the respondents' professional development in the academic field.

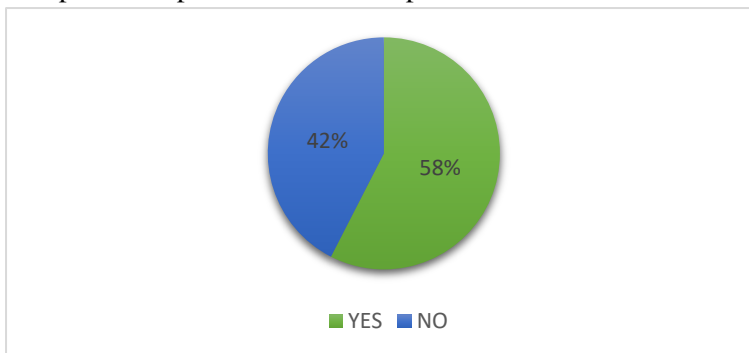


Figure 6. Results to question #2. Do you teach or apply Geography from your profession?

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

The 58% responded to the question that if they have relation with the processes of teaching-learning of Geography in some level of academic formation, while 42% responded negatively to the same question. The above allows to differentiate the areas in which professionals who specialize in the knowledge of soil conditions, as well as characteristics that are identified on it, some for its use through crops or the construction sector. In any of the cases, their performance depends on the knowledge acquired by direct research on the geographical conditions of their area of influence.

4.2.3 Response to the question: In what type of entity do you work?

Figure 7 shows the employment relationship of the respondents.

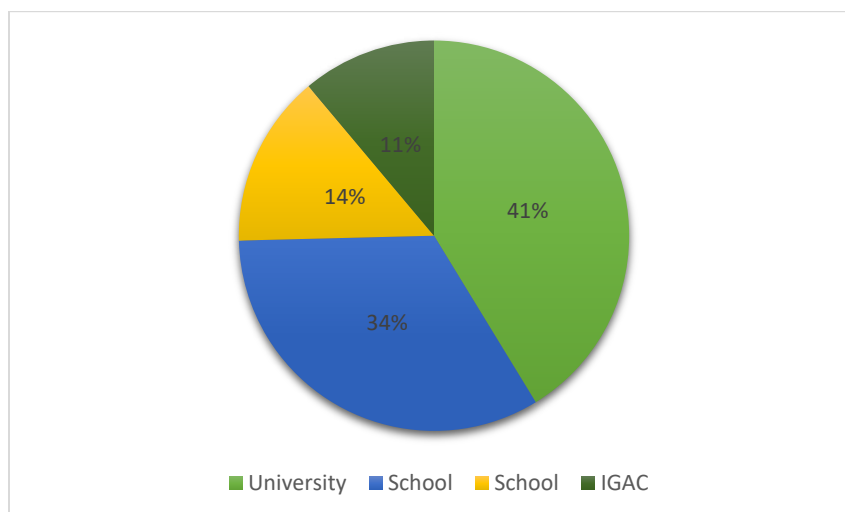


Figure 7. Results to question #3. What type of entity do you work?

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

Forty-one percent of the respondents work in universities in Chocó, 34% in schools in the same department, 14% in schools and 11% in the Agustín Codazzi Geographic Institute (IGAC). The latter is the entity in charge of producing the official map and cartography of Colombia, elaborating the national cadaster of real estate property, inventorying soil characteristics, conducting geographic research in support of territorial development, training and educating professionals in geographic information technologies, and coordinating the Colombian Spatial Data Infrastructure (ICDE). (INSTITUTO GEOGRAFICO AGUSTIN CODAZZI, 2021). From the above, it can be inferred that the majority of respondents do teach in educational institutions while those who do not, but all they work directly related to land use and its geographical characteristics.

4.2.4 Response to the question: Do you belong to any research group dedicated to the line of geography in Chocó?

Figure 8 shows the relationship of the respondents with research groups that develop their activities under the line of Geography in the department of Chocó.

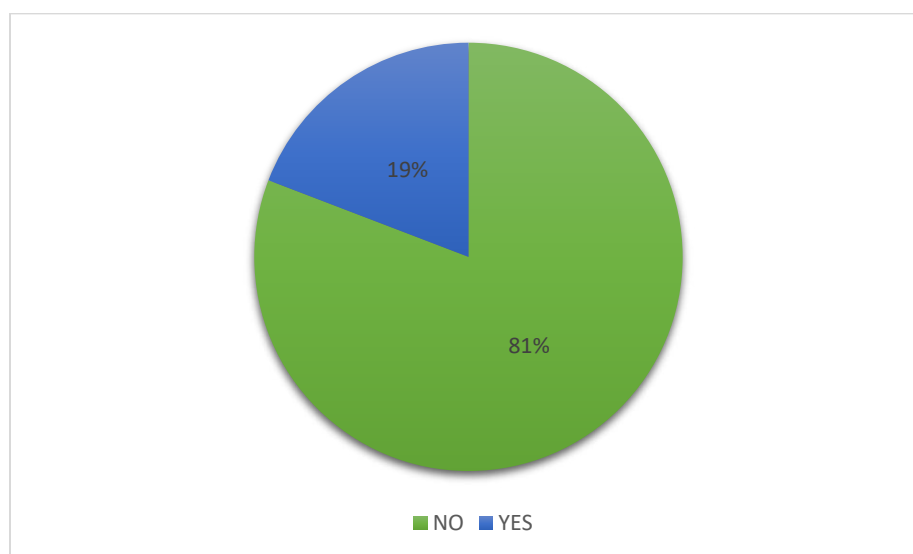


Figure 8. Results to question #4. Do you belong to any research group dedicated to the line of geography in Chocó?

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

81% of those surveyed stated that they have no relationship with a research group that allows the execution of scientific projects and publications related to the study of Geography in Chocó, which explains the low level of bibliographic records corresponding to the development of scientific documents in the aforementioned area.

4.2.5 Response to the question: Have you published articles, papers/books, presentations related to geography or geography teaching?

Figure 9 shows how respondents have participated in the elaboration and publication of scientific papers.

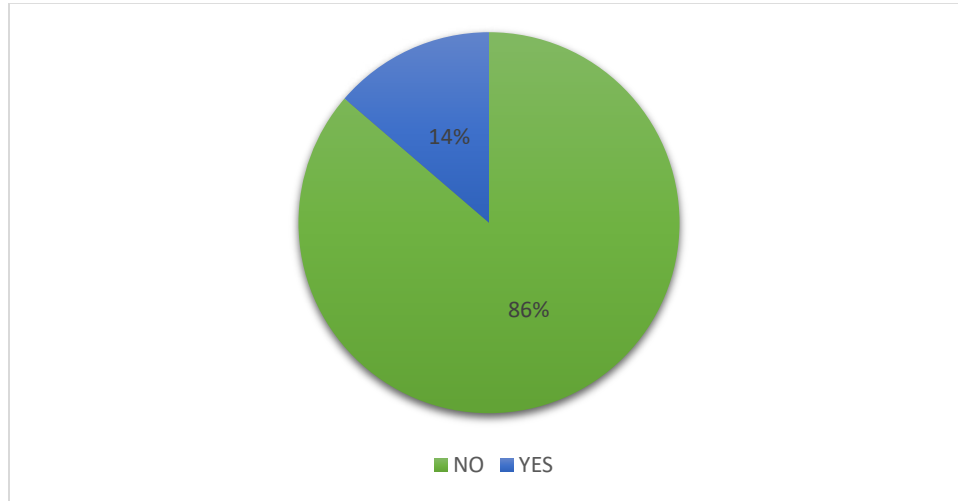


Figure 9. Results to question #5. Have you published articles, papers/books, papers related to geography or geography teaching?

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

This confirms the position expressed in the previous question, and indicates the need to encourage the creation of lines of research that allow for theoretical growth in terms of the production of scientific documents and their subsequent publication.

4.2.6 Response to the question: Have you done any refresher studies at the geography level?

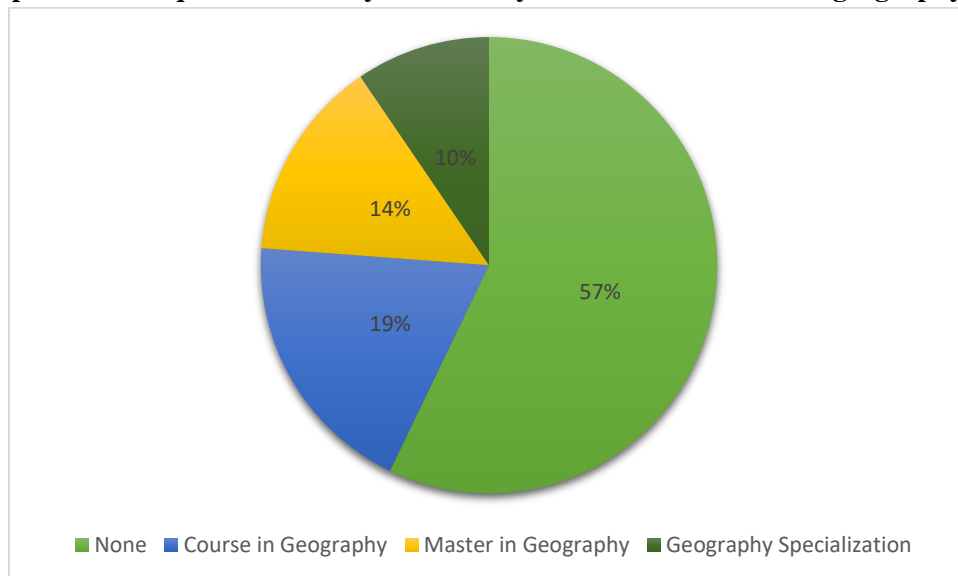


Figure 10. Results to question # 6. Level of training in Geography
Source: Own elaboration (2021); based on data provided by Scopus.

Figure 10 shows that 57% of those surveyed stated that they have not recently studied any updating of knowledge in the area of Geography, 19% have taken updating courses, 14% have taken master's degrees, and 10% have taken specialization courses. This shows the degree of lack of updating those professionals in areas related to Geography in the department of Chocó, constituting a need.

4.2.7 Response to the question: What level of importance do you consider geography to have?

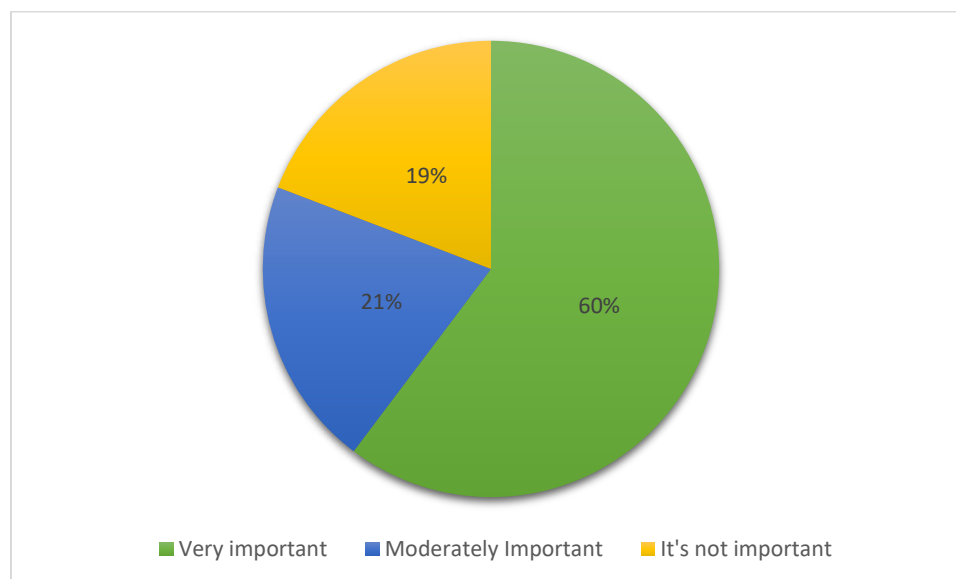


Figure 11. Results to question #7.Importance Level

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

5. Conclusion

Thanks to the bibliometric study presented in this paper, it is possible to identify a low participation of professionals in the area of Geography, in activities aimed at the implementation of research projects and contributions in scientific publications derived from these projects, which is a necessity for the academic world because thanks to a growth in publications, the area of knowledge can be kept updated and thus provide quality education to future professionals.

The results obtained in the questionnaire applied to 73 professionals in the area of Geography allowed to identify the absence of research lines that evaluate the performance of this area in the execution of academic plans or strategies in primary, secondary and higher education institutions. This leads to a low production of published scientific articles and a lack of updated documents. However, it is also possible to identify the perception of importance for the respondents, the academic training in the area of Geography and its recognition as a fundamental Social Science in the teaching-learning process, which allows the construction of a vital knowledge for the development of many of the professional careers that directly or indirectly have some influence on the analysis of the soil and its characteristics and properties. Similarly, the importance of knowing the territorial distribution in the department of Chocó is identified, which is based on the study of its

Geography, hence the need to constantly update the subject plans through constant research in the area.

This paper concludes by identifying an opportunity through the lack of bibliographic material that allows the updating of Geography programs in educational institutions, through the creation of research lines that lead the authors to the execution of research projects that conclude in the publication of new knowledge that encourages the theoretical growth of the area of study.

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