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Ecology of knowledges and languages in Latin American academic production*

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Abstract

The Latin American academic production is analyzed relating to its visibility, internationalization, and the ecology of knowledges and languages. Bibliometric tools were used to form a *corpus* of 2,939 studies in the Scopus database between 2010-2019, analyzed in two dimensions: the output/editorial dimension, and the input/epistemological dimension, focusing on three aspects: (1) evolution per year and per country; (2) most used languages and journals; and (3) international collaborations. The results of the epistemological dimension showed a greater collaboration with authors from the Global North, especially with Spain, the United States and England (in the case of Mexico and Chile) and Portugal (in the case of Brazil). Regarding the quantitative evolution, a steady growth was observed in Latin America, with Brazil occupying the first position. Spanish predominated as the language of publication, although a trend towards English was observed in the second five-year period analyzed, surpassing Portuguese. Taken together, the results of the study suggest that the patterns of academic production in Latin America do not show an ecology of knowledges and languages.

Keywords: Academic Production. Internationalization of Higher Education. Latin America. Spanish. Portuguese. English.

* According to Santos (2014) current discussions in the field of epistemology indicate a change from a traditional view of 'knowledge' as a unified and fixed entity, to a pluralistic and dynamic view of 'knowledges', due to the changing conditions and settings in which these 'knowledges' are produced, reproduced, contested and transformed, involving social, political, historical, economic (and other) factors.

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1 Introduction

Santos' notions of “abyssal lines”, “ecology of knowledges” and “epistemologies of the South” (2014) are related to his view that modern Western epistemologies consist of a system of visible and invisible lines that divide the world, whereby knowledges produced in the Global North are visible, whereas those produced in the Global South or “on the other side of the lines”, are not. According to this author, the exclusion or “invisibility” of knowledges produced on “the other side” of the abyssal lines could be avoided by promoting an “ecology of knowledges”.

To reflect on the possibilities of this ecology, we look at academic production in Higher Education in the Global South¹, more specifically, in Latin America, looking for traces of internationalization considering the increase in academic production in that region and the role of languages and public policies for internationalization geared towards capacity building, assessment systems and open science that foster that visibility (SANTIN; CAREGNATO, 2020).

2 Scientific production in Higher Education and internationalization in Latin America

Regarding public policies for internationalization in Latin America, Souza, De Filippo and Casado (2020) analyzed the Brazilian mobility program “Science without Borders” (SwB) as a public policy for internationalization in the country. The results of their analyses found the SwB was an important policy for internationalization and academic production in Brazil. Based on Lima and Maranhão's (2009) notions of passive *versus* active internationalization, Souza, De Filippo and Casado (2020) stated that academic programs and flows can be analyzed as evidence of public policies for internationalization, giving other examples in the region, such as the Argentina program “Bec.Ar” and the Chilean “Becas Chile”.

Chiappa and Finardi (2021) analyzed the SwB and the “Becas Chile” programs as evidence of decolonial legacy and public policies for internationalization in Brazil and Chile. Also in Chile, Ganga-Contreras *et al.* (2020) analyzed the role of rankings in the quality of Chilean universities. According to these authors, Latin America still has to improve public policies to support quality assessment and accountability of universities, and rankings can be an important instrument to support national and international policies in this direction.

¹ Following Dados and Connell (2012), we use the term “Global South” as a geopolitical rather than geographical term, and as metaphor for underdevelopment, alluding to a position of periphery and invisibility, despite the fact that the notion of geographical location will also be discussed in the present paper.

Céspedes (2021) analyzed the production of the latest Scopus and Web of Science (WoS) lists (March 2020) discussing the presence of Latin American journals in these mainstream databases. The results of her study showed Brazil as the regional leader, although the predominance of Brazilian journals using Portuguese was unmatched in those publications. Spanish was the predominant language, especially in the Social Sciences and Humanities area. The combination of Spanish and Portuguese was significantly smaller, leading her to question the role of English in the region.

Guzmán-Valenzuela and Gómez (2019) analyzed the patterns of publication in Higher Education studies in mainstream and non-mainstream journals in Latin America between 2000-2015, in a *corpus* of 1,370 papers, 130 of which were indexed in the WoS Core Collection indexes and 1,240 of which were indexed in the Scientific Electronic Library Online (SciELO) index. The results of their study showed a dual pattern of trying to maintain local recognition and identities by publishing in national languages and vehicles, while acquiring visibility in the North by publishing in English in international journals.

Regarding the role of collaboration in the production of knowledges, De Wit (2020) claims that it is possible to observe a paradigm shift in internationalization, from cooperation to competition, over the last three decades, resulting in an increasing dominance of English in Higher Education. To see how this pattern may be enacted in the Global South, we propose an analysis of the academic production in Latin America as a “window” to observe the tensions between local/global recognition and the role of English/Spanish/Portuguese in the production, dissemination and internationalization of knowledges.

3 Scopus and the Global South

Koch *et al.* (2020) analyzed the internalization trajectories of academic journals in Chile showing a rise of nationalist/regionalist orientations in the late 19th and early 20th centuries and intensification of internationalization thereafter. Using scientometric techniques, they showed that global research production is still concentrated in a relatively small number of nations.

Regarding the role of English in the internationalization process, Koch, Vanderstraeten and Ayala (2020) suggest that translation flows into other languages tend to reproduce (rather than correct) the unequal distribution observed in geographic/bibliometric analyses. The number of books translated to and from English is evidence of this (SWAAN, 2001). Heilbron (2014) investigated the emergence of the Social Sciences as a global field, claiming that about 60%

of all book translations are made from English. In another study, Koch and Vanderstraeten (2019) suggest that journal citation and reputation indexes show similar results, that is, research from the “core” stands a better chance of being cited and translated than research from the “periphery”.

Similarly, Hamel (2013) suggests that research produced in English or in English-speaking countries has a better chance of being accepted and published. Indeed, many scholars (for example, JENKINS, 2013; KOCH; VANDERSTRAETEN; AYALA, 2020) claim that the increasing use of English as the academic *lingua franca* is an important aspect of the transition from national to international tensions in Higher Education and in the globalization of knowledges and internationalization of Higher Education.

Regarding other languages in this process, Koch, Vanderstraeten and Ayala (2020) show that despite the relevance of Spanish as a global language, it does not measure up to English as the international language of science and scholarship. The aforementioned authors conclude that while the expansion of science in the 18th and 19th centuries strongly relied on a “nationalization” orientation, an opposite trend is observed in the 19th and 20th centuries.

As the evolution of science adopts a more international orientation in recent decades, the tensions between different geographical orientations and the distance/division between the Global North/South (or between the knowledges produced in the two sides of Santos’ abyssal lines) is more pronounced. As international academic production grows, scientometric databases such as WoS and Scopus allow the display and analysis of global networks of collaboration and exchange, as well as the calculation of visibility of researchers, universities, journals, nations, and other issues related to the globalization/internationalization of science.

Although the indicators from bibliographic bases are biased, given the greater incidence of literature from the Global North, published predominantly in English, in the areas of Science, Technology, Engineering, and Mathematics – STEM (CHAVARRO; RÁFOLIS; TANG, 2018), during the last two decades, the two main bases of the WoS and Scopus have endeavored to become more inclusive, in terms of coverage of journals from the Global South. To illustrate this, the number of new Latin American journals indexed between 2005 and 2011 in the WoS and Scopus databases was 240 and 573 respectively (COLLAZO-REYES, 2014).

Mongeon and Paul-Hus (2016) observed that, when comparing coverage by area of knowledges in both databases, the soft sciences have greater representativeness

in the Scopus database when compared to WoS. This is confirmed when looking at publications in Latin America, with 281 titles indexed in Scopus *versus* 98 in the WoS database for the year 2020. Thus, considering that Higher Education studies are predominantly concentrated in Social Science journals and the objective of the present study is to relate the scientific production concentrated in the Global South (looking for traces of internationalization and the role of languages in it), the Scopus database was chosen as the data source for this study. This is because it has the greatest coverage relating to the number of indexed journals in Latin America, allowing for a broader analysis of the scientific production in the area.

4 Study design

This study analyzes the scientific production of Higher Education studies published by Latin American journals indexed in the Scopus database, in the period between 2010-2019, looking for traces of internationalization and the role of languages in it. The choice of Scopus is justified in its coverage of all areas of knowledges and the number of journals indexed in this database (LI *et al.*, 2010). To this end, three variables were selected to be focused on: (1) the quantitative evolution of publications per year and per country; (2) the trends observed in terms of most published titles, most cited titles, and the language of publication; and (3) the international collaborations among authors.

A bibliometric approach was employed to generate and analyze the data, collected in August 2020 from the Scopus database using the descriptors “Higher Education”, “University Education”, and “internationalization” (and “internationalisation”). The preliminary search yielded 75,610 tokens of global scientific production. After applying the geographical delimitation filter for Latin America, considering the production of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Guyana, Honduras, Cayman Islands, Jamaica, Mexico, Nicaragua, Paraguay, Panama, Peru, Puerto Rico, Dominican Republic, Trinidad and Tobago, Uruguay and Venezuela, 2,939 papers composed the *corpus* of analysis.

The *Bibliometrix* (ARIA; CUCCURULLO, 2017) bibliometric tool Biblioshiny² was used to treat and analyze the data, considering the three variables aforementioned. The results were described in terms of Noronha and Maricato’s (2008) suggestion to use indicators to assist in the analysis and evaluation of academic production, classified in two measures: input and output. The input measure is related to the elements that motivate the construction of a research study, such as the choice of the theme, the conceptual basis, and collaboration among authors. The output

² More information at: <http://bibliometrix.org/biblioshiny>.

measure is related to how the product is generated in terms of dissemination of knowledges, including editorial features such as the choice of channel for publication, the choice of language for publication, and the amount of individual and collective production.

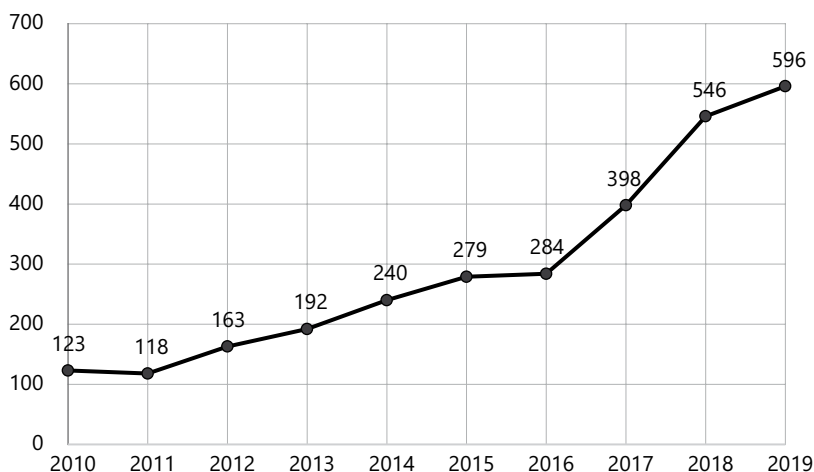
5 Results

To evaluate scientific production using input and output measures, the results were categorized into two dimensions: (1) the editorial and (2) the epistemological. The first dimension is associated with the output measure and examines aspects related to annual scientific production per country, the most prevalent languages in the publications, and the journals that published the most papers. Regarding the input measures, the most cited authors and journals, as well as international collaborations inside and outside Latin America, were analyzed in the epistemological dimension.

6 Latin American production: output/editorial dimension

In the period of analysis, 693 journals published articles on Higher Education produced by authors linked to Latin American countries. The production measured during the decade, represented by Graph 1, shows that the cumulative growth was continuous and stable with an annual growth rate of 19.17%.

Graph 1 - Annual Scientific Production (2010-2019)



Source: Research data from 2019

The observed growth reflects the increase and consolidation of policies related to greater investment in Science, Technology and Innovation (ST&I), training of human resources and improvement of scientific production evaluation actions. Likewise, the changes observed in scientific communication practices, materialized in the transition from printed to electronic and digital formats, as well as the intensification of actions to encourage ‘open access’, in addition to the interest in internationalizing national productions, are driving the agents for the increase observed during the period under analysis (SANTIN; CAREGNATO, 2019).

The analysis of scientific production broken down by country reveals that 1,167 articles (39.70% of total data) were published in Brazil. Table 1 shows that the countries with the highest production after Brazil are Mexico, Chile, Colombia, and Argentina

Table 1 - Documents per country (2010-2019)

COUNTRY	DOCUMENTS
Brazil	1,167
Mexico	540
Chile	458
Colombia	318
Argentina	154
Others	302

Source: Research data from 2020

These results are in agreement with Céspedes’ (2021) regarding the predominance of Brazil and with Guzmán-Valenzuela and Gómez (2019) regarding the dual pattern of publication. The latter study concluded that Mexican production occupies the second position, ahead of Chile, a scenario that is inverted when only the production indexed in the WoS main collection is analyzed. Although Guzmán-Valenzuela and Gómez (2019) analyzed the period between 2000 and 2015, their results show that, with the expansion of the analysis period, reaching the year 2019, no change was perceived among the countries that produce the most papers in Latin America.

The Spanish language is predominant in Latin America, with few countries producing publications in English, Portuguese, and French. To analyze whether the language adopted for the publication of papers reverberates with the numerical

predominance of Spanish-speaking countries, data were compiled for the period from 2010 to 2019. Table 2 shows that the predominance of Spanish was confirmed as the main language used in publications, reaching 39.70% of the total documents analyzed.

Table 2 - Language of publication

Language	2010-2019		2010-2014		2015-2019	
	Documents	Percentage	Documents	Percentage	Documents	Percentage
Spanish	1,167	39.70%	331	39.59%	836	39.75%
English	1,012	34.50%	217	25.95%	795	37.80%
Portuguese	740	25.13%	273	32.65%	467	22.20%
French	19	0.64%	14	1.70%	5	0.25%
German	1	0.03%	1	0.11%	-	-
TOTAL	2,939	100%	836	100%	2,103	100%

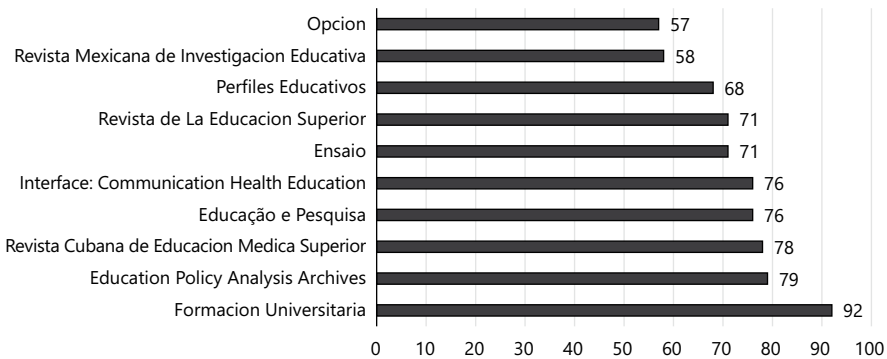
Source: Research data from 2020

In order to verify whether the trend in the choice of language for publication changed over the years, the period was segmented into five-year periods, corresponding to the years from 2010 to 2014 and 2015 to 2019. When considered individually, it is possible to observe that articles published in Spanish did not show a percentage change, both based on 39% of the total publications. However, when looking at the number of publications in English, the second five-year period shows a considerable increase, with a growth rate of 12% between periods, thus surpassing Portuguese as the second choice of language for publications.

These results are somewhat different from those reported in Céspedes (2021) and suggest a possible change in scientific communication practices, regarding the patterns of language choice to disseminate research results. It is noteworthy that in several countries whose major language influence is of Portuguese-Hispanic origin, one third of the documents are published in English. Even so, such evidence may suggest a search for authors and editors to adapt themselves to the rules established for the indexing of journals in prestigious reference bases, such as Scopus, in addition to achieving greater visibility of local productions and, consequently, greater impact, making it accessible to English-speaking countries. In other words, we can see a tension between maintaining local identity/specificity/language and/or adopting English as a global language. We will return to this suggestion in the discussion of the data, relating this trend to current internationalization practices.

Considering that the topic “Higher Education” is mostly related to the area of Education, a different behavior is expected for this field, although, for the purposes of classification of knowledge areas in the Scopus database, both are indexed as “Social Sciences”. A complementary element that confirms the option of authors and editors to publish in English, even in local journals, can be found in Graph 2, with the most published articles in the period between 2010 and 2019.

Graph 2 - Journals with most publications (2010-2019)



Source: Research data from 2020

Looking at Graph 2, with the list of the ten journals with the highest number of published articles, it is clear that, even with the growth of English as the language of publication, scientific dissemination is predominantly concentrated in Latin American journals, since the only journal that is not part of this region, the Education Policy Analysis Archives, is linked to the Arizona State University (ASU), in the United States. The other journals come from the following countries: Brazil (*Interface*, *Educação e Pesquisa* and *Ensaio*), Mexico (*Revista de la Educación Superior*, *Perfiles Educativos*, and *Revista Mexicana de Investigación Educativa*), Chile (*Formación Universitaria*), Cuba (*Revista Cubana de Educación Superior*) and Venezuela (*Opción*).

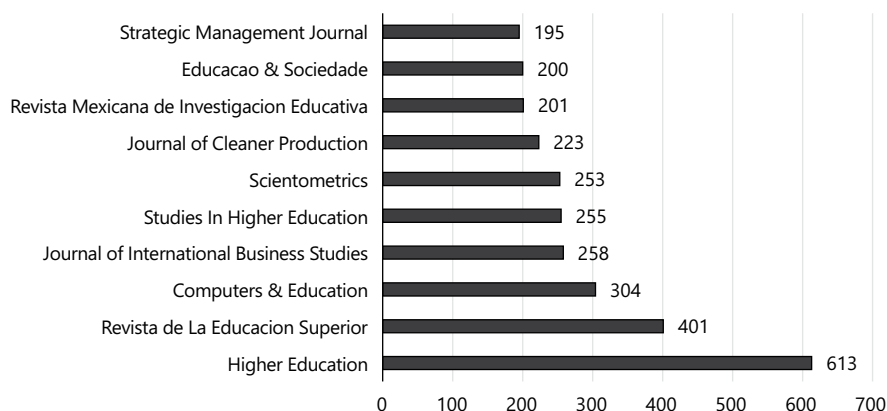
7 Latin American academic production: input/epistemological dimension

Citations can provide useful data for developing indicators to measure the quality of academic production. The count of citations received by articles or journals is an indication of the peer acceptability of the disseminated content. When citations

are analyzed collectively, they can provide “footprints” or evidence regarding how the knowledge disseminated influences the epistemological development of a field.

Data on the ten most cited journals, based on the reference list of articles produced by researchers in Latin America, reveal that six of them come from European publishers. As can be seen in Graph 3, the other journals come from Mexico, with two occurrences (*Revista de la Educación Superior*, *Revista Mexicana de Investigación Educativa*), Brazil (*Educação & Sociedade*) and United States (Strategic Management Journal) with only one token.

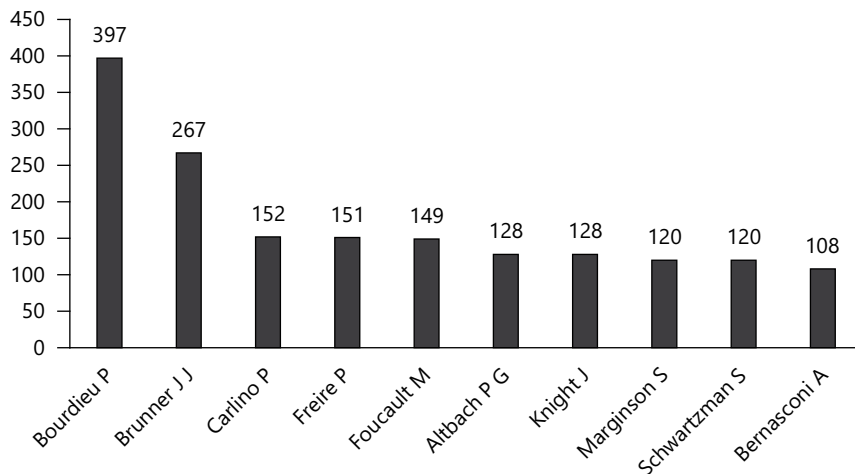
Graph 3 - Most cited journals in reference list (2010-2019)



Source: Research data from 2020

The journals published in Europe come from the following countries: the Netherlands (Higher Education, Journal of Cleaner Production and Scientometrics) and England (Computers & Education, Journal of International Business Studies and Studies in Higher Education).

Considering that the ideas developed by an author in the course of their research trajectory can greatly influence the development of a given field, we examined the ten authors who received the most citations in the list of references, as can be seen with the results compiled in Graph 4.

Graph 4 - Most cited authors (2010-2019)

Source: Research data from 2020.

Although the influence of authors from the Global North is observed in the data, the incidence of authors from Latin America is also noteworthy. In fact, the ranking in Graph 4 shows that the occurrence of authors is uniform, that is, five Latin American authors (Brunner, Carlino, Freire, Schwartzman and Bernasconi) and five authors from Global North countries (Bourdieu, Foucault, Altbach, Marginson and Knight), with Global North authors occupying the 1st, 5th, 6th, 7th and 8th positions whereas authors from the Global South occupy the 2nd, 3rd, 4th, 9th and 10th positions.

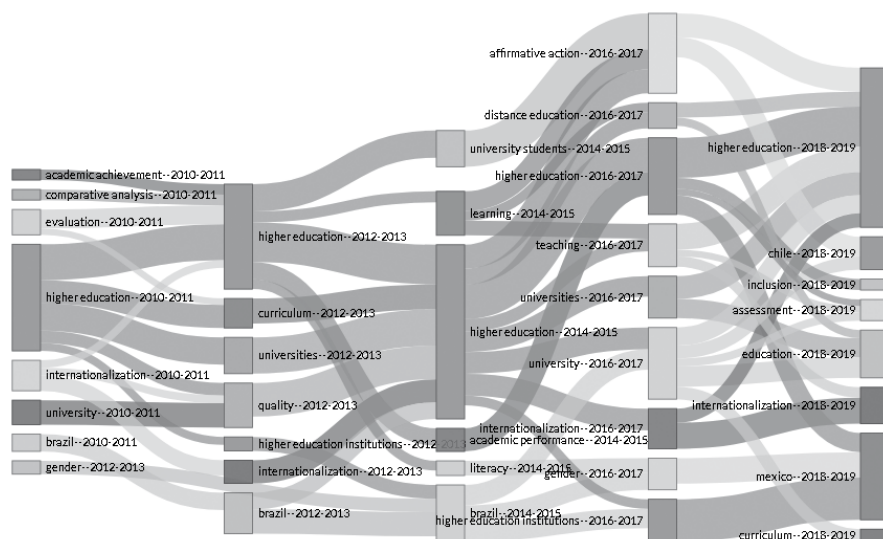
The data regarding the most cited authors and journals provide important evidence to discuss in terms of Santos' (2014) epistemologies of the South, to which we will return later on in this paper. Despite a possible change in trends and orientations, indicating a greater use and recognition of the science produced by Latin American scientists, data still reflect the influence of English and Global North thinkers and journals on the epistemology of Higher Education studies produced in Latin America.

Scientific production indicators are interesting instruments to accompany the epistemological development of a research field. In addition to mapping the journals and authors most cited by members of a research area, it is possible to analyze the evolution of the most recurrent themes in publications, thus having

a broader understanding of the development of a field, captured in the direction of development and predicting trends (XIE; ZHANG; WU, 2020).

In order to demonstrate the thematic evolution in Higher Education studies in Latin America, a Sankey diagram with graphical representation was created to allow the observation of the flow, evolution, and relationship among variables. Each node in the diagram represents a topic, and the size of the node is proportional to the occurrence of the term in the context in which it was analyzed. In the case of the present study, the incidence of keywords in the articles is shown along with how, over time, the topics are interrelated, due to the presence of new works. Figure 1 shows the flow of occurrence and thematic evolution analyzed in the biennia.

Figure 1 - Thematic evolution of “Higher Education” (2010-2019)



Source: Research data from 2020

The evolutionary path shown in the diagram allows us to infer that the “Higher Education” theme is consolidated among researchers in the field, since it is mentioned as a reference for thematic identification, that is, as a keyword, in all the periods analyzed. However, despite being a consolidated term, the research theme is not exhausted, but constantly evolving, through a transfer mechanism, when a node unfolds into a new autonomous thematic node, or through integration, in which other autonomous topics of study are incorporated into an existing node,

as can be seen in Chart 1, with the transfer and integration process from the Higher Education theme compiled in the Sankey diagram (Figure 1).

Regarding the evolution of the term ‘internationalization’, although it is present throughout the analyzed period, it shows a reduced interaction with other areas, as can be seen in Chart 1. Thus, except for the 2010-2011 biennium, which shows an approximation with the area of quality, in the other biennia the term ‘internationalization’ only has a direct relationship with “Higher Education” both in transfer and integration processes.

Chart 1 - Transfer and integration in the process of thematic evolution (2010-2019)

	Thematic evolution movement	Biennium 2010-2011	Biennium 2012-2013	Biennium 2014-2015	Biennium 2016-2017	Biennium 2018-2019
Higher Education	Transference	Curriculum Universities Quality Higher Education institutions	University students Learning Academic performance Literacy	Affirmative action Distance Education Teaching Universities University International-ization Higher Education institutions	Inclusion Assessment Mexico	-
	Integration	-	Academic achievement Comparative analysis Evaluation International-ization	Curriculum Universities Quality International-ization Brazil	Academic performance	Affirmative action Distance Education Teaching Universities University International-ization
Internationalization	Transference	Higher Education Quality	Higher Education	Higher Education	Higher Education	-
	Integration	-	Higher Education	Higher Education	Higher Education	Higher Education

Source: Research data from 2020

It should be noted that, according to the data presented in Chart 1, for the 2018-2019 period, the transfer process cannot be determined, since it will focus on articles published from 2020 onwards, such as the integration process, referring to the biennium 2010-2011, which, in order to assess possible incorporations, would require the investigation of papers published before 2010.

The dimension of collaboration between authors from different countries is a double indicator, since it can provide evidence of possible influences on the epistemological development of a research area, as well as predict the impact of a study, through peer recognition, materialized through citations. Considering the perspective of analysis proposed in this study, the collaboration networks can be observed in the analysis of the input and output measures of scientific production. For this purpose, the collaboration networks between Latin American countries with authors from other geographic regions were analyzed, in terms of co-authorship in studies whose institutional link was outside Latin America.

In order to highlight the most robust collaboration networks, a “map” was designed considering the presence of up to fifteen nodes, that is, with the graphical demonstration limiting the relationship between countries to this number, as can be seen in Figure 2.

Figure 2 - Collaboration network between countries (2010-2019)



Source: Research data from 2020

For the purpose of analyzing the most robust collaboration networks, only the three countries with the highest scientific production in the period were considered, namely Brazil, Mexico and Chile. The Brazilian production has the largest number of documents indexed in the Scopus database on the topic of Higher Education. When verifying the collaboration behavior between countries, there is a significant partnership with Portugal, which is (somewhat) understandable, given that both countries are Portuguese-speaking nations. Next, the most representative collaborations occur with Spain, the United States and England.

Mexico and Chile have stronger collaborations with Spain and the United States, where the influence of language orientation is also noticeable. In general, the collaboration graph allows us to observe that the networks present greater representativeness among nations whose language base is the same or close (for example, Portuguese or Spanish) despite collaborations with countries from the Global North, as observed in the Guzmán-Valenzuela and Gómez (2019) study, showing greater collaboration with European countries (Spain and Portugal) than with Anglo-Saxons (United States).

If we consider intra-regional cooperations, that is, between Latin American countries, it is evident that co-authorship participation among researchers in the region is very low, even among the countries that have the highest production in the area in quantitative terms, which, with the aim of developing a local science (and with certain autonomous epistemological bases), is extremely detrimental, incurring in a reduced impact caused in and by the field.

8 Discussion

Regarding the quantitative evolution of publications per year and per country, a steady growth was observed in Latin America, with Brazil occupying the first position with almost 40% of all production, followed by Mexico, Chile, Colombia and Argentina. When looking at observed trends in the language of publication, Spanish predominated and accounted to almost 40% of all publications analyzed, although a trend towards English was observed in the second five-year period analyzed, with an increase of 12%, surpassing Portuguese as the second language of publication.

Therefore, the development of multilingual approaches in Higher Education Institutions (HEIs) is necessary and one possibility is to use the Intercomprehension approach³, as discussed by Donato and Pasquarelli-Gascon (2015). More

³ Whereby people express themselves in the language they are most comfortable with while attempting to understand the language of the other.

specifically, the role (and value) of Spanish for the internationalization of HEIs should also be reassessed, since it is one of the main languages spoken in the world (by both native and non-native speakers) and it can be used to strengthen international academic relations in/with the Global South (in general) and with Latin America (in particular), with the support of language policies (RAMOS-GARCÍA; VÁZQUEZ, 2018; RUMBLEY, 2010).

In the case of Portuguese, internationalization and language policies are also called into question in order to re-examine the mismatch found by Céspedes (2021) regarding the prominence of Brazil with the unmatched representation of Portuguese in academic production in Latin America. Considering that Portuguese is the ninth most spoken language in the world⁴ and the leading position of Brazil in the region, the dual pattern of recognition found by Guzmán-Valenzuela and Gomez (2019) seems to be more pending of English than Portuguese, despite the latter language's potential for global and local recognition.

These results corroborate those of previous studies reviewed here, regarding the dual pattern of recognition in scientific communication practices in terms of the choice of language for publication, with a tension between maintaining local identity/recognition publishing in Portuguese or Spanish, and/or adopting a more globally competitive character, publishing in English. Regarding the current trends in internationalization practices, we agree with Hamel (2013) and De Wit (2020), that language choice is deeply intertwined and motivated by internationalization policies and pressures. As such, we argue that the increase in publications in English found in our data is a consequence of public policies for internationalization in the region evidenced in mobility programs such as the SwB and Becas Chile.

The second variable also analyzed the trends observed in terms of the most published and cited titles. In this respect, our data confirmed the ascendancy of English, since the only journal that did not come from Latin America was the Education Policy Analysis Archives, from the ASU, in the United States. The other journals most published or cited came from the following countries of the Global South: Brazil (*Interface, Educação e Pesquisa* and *Ensaio*), Mexico (*Revista de la Educación Superior, Perfiles Educativos* and *Revista Mexicana de Investigación Educativa*), Chile (*Formación Universitaria*), Cuba (*Revista Cubana de Educación Superior*) and Venezuela (*Opción*). The most published or cited journals from the Global North came from Netherlands (Higher Education, Journal of Cleaner

⁴ More information at: <https://www.visualcapitalist.com/100-most-spoken-languages/>.

Production and Scientometrics) and England (Computers & Education, Journal of International Business Studies and Studies in Higher Education).

The analysis of the ten most cited authors also shows an influence from the Global North since half of them were from there (Bourdieu, Foucault, Altbach, Marginson and Knight) and five were from the Global South (Brunner, Carlino, Freire, Schwartzman and Bernasconi). We argued that the most cited authors and journals provide important “footprints” to discuss internationalization in terms of Santos’ (2014) epistemologies of the South, as our data still reflect the influence of Global North languages, thinkers, and journals on the epistemology of Higher Education studies and internationalization produced in Latin America. In other words, we can say that the knowledges produced in Latin America are still caught in the tension between acquiring local readership/leadership/relevance and/or global competition/visibility, in what Guzmán-Valenzuela and Gómez (2019, p. 130) call an “uneasy process of securing a dual epistemic recognition” although in the case of our study, this dual pattern seems to be more pending for the North and English.

Finally, regarding the third variable, of international collaborations among authors, and considering the academic production of the three countries that produce the most in Latin America, our data showed significant collaboration with Portugal (in the case of Brazil) and with Spain, the United States and England (in the case of Mexico and Chile) corroborating the results of Souza, de Filippo and Casado (2020) during 2000-2015. Although the direction of collaboration is evident (towards the Global North and English-speaking countries – US and England), the link between Brazil-Portugal and Mexico/Chile-Spain is justifiable (and even expected) in terms of linguistic similarity.

As previously suggested here, the role of Portuguese and Spanish as languages for internationalization could be strengthened, by promoting more academic cooperation with countries which share the same (or similar) languages, as in the case of Brazil-Portugal and Mexico/Chile-Spain. More specifically, in the case of the Portuguese language, academic collaboration could increase in the context of the *Community of Portuguese Language Countries* (CPLP, in the acronym in Portuguese)⁵, with HEIs located in countries such as Angola, Cape Verde, and Mozambique.

In the case of the Spanish language, various collaboration networks could be used to promote internationalization, such as Iesalc-Unesco (*Instituto Internacional para*

⁵ More information at: <https://www.cplp.org/>.

la Educación Superior en América Latina y el Caribe)⁶, Riaci (*Red Iberoamericana Académica de Cooperación Internacional*)⁷ and Redib (*Red Iberoamericana de Innovación y Conocimiento Científico*)⁸.

However, what was neither justifiable nor expected (although Souza, De Filippo and Casado [2020] showed a trend in this direction) were the data concerning intra-regional collaborations, that is, collaborations among authors from Latin America. Co-authorship among Latin American researchers was very low, even among the countries that have the largest production in the field (in quantitative terms). This situation is extremely detrimental to the development of local sciences (with certain autonomous epistemological bases), as it results in a reduced impact caused in and by the field.

Again, we argue that this represents an important ‘footprint’ of internationalization patterns and orientations in the region, as well as the role of languages and epistemological locations in it. As suggested by Wit (2020), the paradigm shift from collaboration to competition seems to be infused in publication patterns in Latin America, whereby authors ‘collaborate’ more with authors outside their own region in order to “compete” more globally. Using Santos’ terminology, they collaborate more with authors “from the other side” of the abyssal lines, thus contributing to the “invisibility of knowledges” produced in the Global South.

Considering the discussions presented in this section, we see that changes are necessary in public policies for internationalization and academic production in Latin America, as they tend to favor collaborations with the Global North and publications in English and in international journals, which may require article publication charges (APCs), consequently limiting access to information and the possibilities of creating an ecology of knowledges and languages.

9 Final considerations

The present study analyzed the academic production in Higher Education studies published in Latin American journals, looking for traces of internationalization and the role of languages and epistemological location in it. Regarding internationalization in a post-COVID-19 scenario, and according to Stallivieri (2020), virtual exchange is a relevant alternative to replace physical academic mobility and we further argue that it has to be expanded to other languages apart

⁶ More information at: <https://www.iesalc.unesco.org/>.

⁷ More information at: <https://riaci.org/>.

⁸ More information at: <https://redib.org/?lng=en>.

from English (see, for example, FINARDI; GUIMARÃES, 2020) to reflect an ecology of knowledges and languages.

In summary, this study highlights the importance of changes in public policies for Higher Education and internationalization in Latin America, to make its languages and academic production more visible and available to the rest of the world, fostering the development of an ecology of knowledges and languages.

Ecologia de saberes e línguas na produção acadêmica latino-americana

Resumo

A produção acadêmica latino-americana é analisada em relação à sua visibilidade, internacionalização e ecologia de saberes e de línguas nesse processo. Ferramentas bibliométricas foram utilizadas para formar um corpus de 2.939 estudos da base de dados Scopus entre 2010-2019, analisados em duas dimensões: a dimensão input/editorial, e a dimensão output/epistemológica, focando em três aspectos: (1) evolução por ano e país; (2) línguas e periódicos mais usados; e (3) colaborações internacionais. Os resultados da dimensão epistemológica mostraram maior colaboração com os autores do Norte Global, especialmente com a Espanha, os Estados Unidos e a Inglaterra (no caso do México e do Chile) e de Portugal (no caso do Brasil). Em relação à evolução quantitativa, observou-se um crescimento constante da produção latino-americana com o Brasil ocupando a primeira posição. O espanhol predominou como idioma de publicação, embora se observe uma tendência para o inglês no segundo quinquênio analisado, superando inclusive o português. Tomados em conjunto, os resultados do estudo sugerem que os padrões de produção acadêmica na América Latina não apresentam uma ecologia de saberes e de línguas.

Palavras-chave: Produção Acadêmica. Internacionalização do Ensino Superior. América Latina. Espanhol. Português. Inglês.

Ecología de saberes y lenguas en la producción académica latinoamericana

Resumen

Se analiza la producción académica latinoamericana en relación a su visibilidad, internacionalización y ecología de saberes y lenguas. Se utilizaron herramientas bibliométricas para conformar un corpus de 2.939 estudios en la base de datos Scopus entre 2010-2019, analizados en dos dimensiones: la dimensión input/editorial, y la dimensión output/epistemológica, centrándose en tres aspectos: (1) evolución por año y país; (2) idiomas y revistas más utilizados; y (3) colaboraciones internacionales. Los resultados de la dimensión epistemológica mostraron una mayor colaboración con autores del Norte Global, especialmente con España, Estados Unidos e Inglaterra (en el caso de México y Chile) y Portugal (en el caso de Brasil). En cuanto a la evolución cuantitativa, se observó un crecimiento sostenido en América Latina, ocupando Brasil la primera posición. Predominó el español como idioma de publicación, aunque en el segundo quinquenio analizado se observó una tendencia hacia el inglés, superando al portugués. En conjunto, los resultados del estudio sugieren que los patrones de producción académica en América Latina no muestran una ecología de saberes y lenguas.

Palabras clave: Producción Académica. Internacionalización de la Educación Superior. América Latina. Español. Portugués. Inglés.

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