A Bibliometric Analysis of the Spanish Scientific Production on Teaching Oral Communication Between 2010 and 2020

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Abstract – **This research paper aims to analyse the visibility, scientific production and educational impact of teaching spoken language between 2010 and 2020 by using bibliometric techniques. The Scopus and Web of Science databases have been used in order to carry out the study. We have selected articles published in journals included in the thematic category of *Teaching Oral Communication* in the decade 2010-2020. Out of 2677 articles, only 457 offer relevant data for our analysis, and of these, no more than 155 documents are written by Spanish authors. The lack of articles on this topic seems obvious, which consequently leads to the conclusion that there is a high need to conduct rigorous research on the subject and design educational models that allow teachers to implement efficient didactic methods and strategies when teaching oral communication in the current Spanish educational system.**

Keywords – **bibliometric techniques, Web of Science, Scopus, oral communication, teaching**

1. Introduction

In order to evaluate the scientific production on teaching oral communication, we have resorted to bibliometrics, a methodology used to analyse research in different fields [1], [2], [3], [4], [5], [6]. In recent years, interest in scientific production has gained importance, giving rise to a wide variety of studies, some of which provide data on the evolution of Spanish research production. A few of the studies in which this technique has been most widely used and implemented have been focussing on scientific productivity according to gender [7], [8], [9], the quality of Spanish universities in terms of teaching and research [10] and the editorial boards of scientific publications [11].

Bibliometric indicators assess scientific productivity and offer an accurate analysis of the state of research development. In order to evaluate the quality and quantity of research, the total number of articles published in different databases and the total number of citations of each scientific publication represented by bibliometric indicators are taken into account. The most commonly used citation index is the h-index (from Hirsch); it represents the importance of a researcher's work by ranking publications in accordance with the number of citations received [12]. According to [13], indicators such as the h-index also serve to give visibility to the authors who publish the most in a certain field, the academic and research centres to which they belong, the impact of their work and the collaborative networks established between authors. In addition, the h-index has given rise to several studies of new indicators [14], [15].

The growing interest in the study of oral communication teaching in the Spanish educational system is the result of the scarce presence of oral communication in primary and secondary education classrooms, as well as in the textbooks of each educational stage [16], but it is also probably due to the teachers' lack of resources and strategies in this

area. The basic and common objective of pre-university mother tongue teaching is to improve students' linguistic and literary competence [17]. Oral communication competence represents a fundamental element of language and literature curricula and the teaching of oral discourse should not be limited only to the language class, as today's society has grown to be more complex and pluralistic; spoken mass media have become more relevant in all areas and nowadays, more than ever, citizens should be trained to master oral communication skills and competences in order to interact with others. According to [18], oral communication is the foundation of education, but, in Spain, this linguistic dimension is not addressed in a planned way and the development of spoken language in educational practices is deficient. Schoolchildren's oral skills are limited [19] and despite the recognition of the practical and social usefulness of teaching spoken language, oral communication is not highly regarded in schools.

In order to support these assessments, we find it interesting to explore the scientific production on the subject with the help of bibliometric indicators. For this reason, the present research paper aims to analyse the scientific production on oral language teaching from the last decade in order to identify its educational impact and corroborate the low interest that it seems to also have had in terms of didactic research. We have collected data from two databases: Scopus and Web of Science (WoS). The analysis focuses on the evolution of productivity over time, the languages and the types of documents used, the publications in which the research is published, the characteristics of the scientific production, the authors and the citations, with the intention of understanding the scientific production and the evolution of oral communication in Spanish as a mother tongue in recent years.

2. Method

2.1. Materials and Procedure

In terms of search strategies, the following criteria were established in order to select the databases used in the review: first, they had to be databases specialising in education; and second, they had to cover different geographical areas so as to allow a comparison with the scientific production carried out in a specific Spanish institution. Thus, having established the criteria, two final databases were selected: Scopus and Web of Science (WoS), which belongs to the company Thomson Reuters (WoS). SCOPUS is the largest database, it is easy to access and can be used to identify citations and abstracts of all scientific productions (articles, books, conference proceedings). It also allows the identification of the impact factor of each publication. WoS (Web of Science) provides access to a set of databases containing book citations, articles published in scientific journals and other types of specialised materials from all academic fields.

We selected these two databases because, to the contrary, for more than 40 years, WoS was the only international database including the impact factor of journals in a multitude of disciplines. On the other hand, Scopus was chosen as it was considered to be the most important multidisciplinary database existing today [20]. Several researchers have conducted studies focussing on comparing the two databases and emphasising their characteristics, from thematic areas, journal titles and languages to geographical distribution [21], [22].

We created a data template with the bibliographic information extracted from the aforementioned databases and we analysed the following aspects: the productivity of the scientific production on spoken language teaching in absolute terms, the evolution of the scientific productivity over the years and the citations obtained by each publication in order to identify the extent of the impact.

2.2. Variables

This paper analyzes the following variables:

- The evolution over time of the scientific production in terms of the number of papers collected in Scopus and WoS from 2010 to 2020 in the *Education* category.
- The typology of the documents according to different categories: articles published in journals and conference papers.
- The language of the publications, with special emphasis on articles written in Spanish and published in Spanish journals. We collected the titles of the journals, the language and the country of publication.
- The academic institution where the authors work.

The analysis of the results was carried out using the SPSS Statistics 26 software. Percentage and frequency counts, as well as Kendall's T correlation coefficient and the nonparametric Mann-Whitney U-test were applied.

2.3. Evolution of Scientific Production in Scopus and WoS

Once the databases were chosen, we went on to develop the descriptors or keywords to be used during our search. It should be noted that we already had a prior idea of which words would be necessary to carry out the search, since we had mapped the existing studies related to oral communication and education; in addition, we had also used several Boolean search operators and indicators [23], [24] in the title in order to combine different words related

to the topic of study. In this case, we knew that searching for "oral communication" or "oral communication and education" would yield a very comprehensive amount of studies.

We began our researches by using the specific combination of words "teaching oral communication" OR "teaching oral communication skills". The inverted commas were employed to focus the search on studies that were exclusively centred on oral communication from a didactic perspective. The Boolean operator "OR" was used because we observed that some studies had a general approach to oral communication, while others dealt with the topic from a more specific perspective, focusing on oral communication skills. Consequently, we decided to use this operator in order to find papers containing at least one of the two terms.

On the other hand, a second word combination was also employed to include the concepts "method" and "model", as we noticed that many studies contained this word in their title to refer to a specific strategy used for the development of oral communication. As a consequence, the second search contained the following combination of words: ("model" OR "method") AND ("teaching oral communication" OR "teaching oral communication skills"). In this case, the Boolean operator "AND" was included to find research papers that connected the terms between the two brackets.

3. Results

Below, we list the studies found in each database and for each descriptor. In this first search, no filters were applied (Table 1) and a total of 2677 publications were identified.

Table 1. Results of the first search for articles on oral communication in Scopus and WoS

Databases	Descriptors	Results
Scopus	teaching oral communication" OR "teaching oral communication skills"	967
	("model" OR "method") AND ("teaching oral communication" OR "teaching oral communication skills")	223
WOS *Web of Science*	teaching oral communication" OR "teaching oral communication skills"	1485
	("model" OR "method") AND ("teaching oral communication" OR "teaching oral communication skills")	2
	Total number of articles	2677

Source: Own elaboration based on the data obtained from Scopus y WoS

After carrying out the first search and observing the large volume of studies found, we decided to develop some inclusion criteria containing the research objectives in order to further refine the search results. The following requirements were taken into account:

- Language: English and Spanish.
- Type of document: empirical research/studies.
- Source articles in scientific and/or academic journals.
- Education level: research focused on pre-school, primary, secondary and university education.
- Category: education and research in education.
- Research subject area: social sciences.
- Direct relation with the objective of the study: the studies must be centred on oral communication, as well as on teaching models or methods, with the main aim of developing this type of skill in the classroom.

Thus, having established the inclusion criteria, a second search was carried out by applying the filters available in each database and by taking into account the aforementioned requirements. However, the mention must be made that these two databases do not offer the same filters, so we apply the ones available for each of them. This second search returned the following studies (Table 2. Results of the second search):

Table 2. Results of the second search for articles on oral communication in Scopus and WoS

Databases	Descriptors	Results
Scopus	teaching oral communication" OR "teaching oral communication skills" ("model" OR "method") AND ("teaching oral communication" OR "teaching oral communication skills")	267
WOS *Web of Science*	teaching oral communication" OR "teaching oral communication skills"	190
	Total number of articles	457

Source: Own elaboration based on the data obtained from Scopus y WoS

The final search retrieved 800 articles in WoS, but those belonging to the fields of medicine, psychology and linguistics were discarded. In the end, the final selection included 570 articles from the field of Education, but only 190 were strictly related to oral communication (Table 2).

In terms of countries, the first place is held by the United States, followed by Spain, the country with

the second highest number of publications on oral communication (76 articles). The table below (Table 3) lists the journals in which most articles on this topic are published, while the graph (Figure 1) shows the number of citations per year of the 76 publications written by Spanish authors.

Table 3. Spanish journals present in Web of Science (2010-2020) in the Education category in which articles on oral communication have been published

Pixel-Bit- Revista de medios y educación
Revista Eureka sobre enseñanza y divulgación de las ciencias
Foro de profesores de E-LE
Revista Complutense de Educación
Encuentro-Revista de investigación e innovación en la clase de idiomas
Profesorado-Revista de Curriculum y Formación de profesorado
Revista Entrelinguas
Porta Linguarum
Revista Española de Pedagogía
Aula de Encuentro
Estudios sobre Educación
Revista electrónica interuniversitaria de formación del profesorado

Source: Own elaboration based on the data obtained from WoS
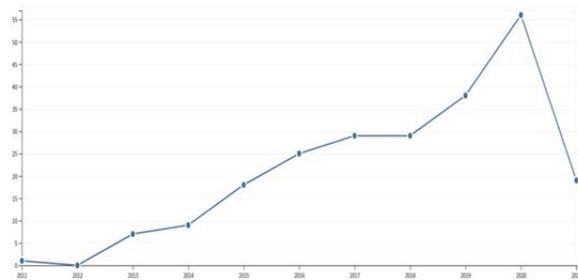

Figure 1. Number of times cited per year of the 76 publications by Spanish authors
Source: Web of Science

Table 4. Most cited Spanish authors in publications on oral communication in the WoS

Authors	Year of publication	Articles & journal	Number citations	citations /year
Lazaro, A. & García Mayo, M. P	2012	L1 use and morphosyntactic development in the oral production of EFL learners in a CLIL context. IRAL. *International review of applied linguistics in language teaching*, 20(2), 135-160	27	2.7
Gracia, M; Vega, F. y Jose Galvan-Bovaira	2015	Developing and testing EVALOE: A tool for assessing spoken language teaching and learning in the classroom. *Child language teaching & therapy*, 31(3), 287-304	10	1.43
Jordano de la Torre, M.	2011	Learning and teaching the spoken competence in an open distance context: from the cassette to virtual interaction. *RIED-Revista iberoamericana de educación a distancia*, 14(1), 15-39	10	0.91

Source: Own elaboration based on the data obtained from WoS

According to Table 4, we can observe that the authors who have been cited most often belong to the University of Navarra, the University of the Basque Country, the National Distance Education University (UNED), the University of Barcelona and the University of Castilla-La Mancha.

The number of bibliographic references of the articles presented in Table 4 (Kendall's T b= .16; r = .26) and the number of pages of each article (Kendall's T b= .15; r = .26) were statistically significant (p<.01) when correlated with the total number of citations per year. This is relevant given that Spanish authors have published most of their articles in prestigious international journals and only a few of their papers were identified in Spanish journals. This is in line with the results of [23], who found that a low number of research articles focusing on education were published in Spanish, in contrast to the increasing number of articles published in education journals from English-speaking countries. It is worth mentioning that the most cited articles are those published in English, in high impact factor journals. The differences between the number of articles published in English and those written in Spanish were statistically significant: X2 = 21.110, p < 0.001.

As for the Scopus database, 267 articles strictly related to oral communication were selected after the second search. The United States is the most prolific publisher, being followed by Spain, with a total of 79 articles published during 2021-2020. According to this database, Spain is ahead of countries such as England, Russia, Australia, China, France, the Netherlands and Turkey in terms of research production on this topic (Figure 2).
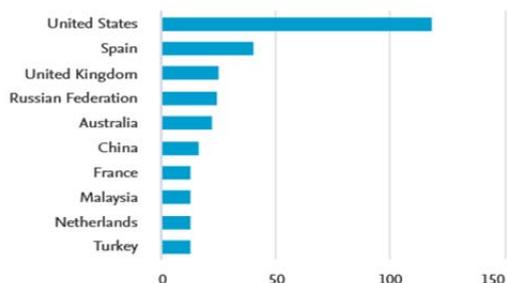
Figure 2. Ranking of countries in the publication of articles on oral communication
Source: Scopus

Table 5 shows the main Spanish journals present in the Education category of Scopus (2010-2020) that have published articles on oral communication.

Table 5. Spanish journals present in Scopus (2010-2020) in the Education category in which articles on oral communication have been published

Revista Complutense de Educación
Estudios sobre Educación
Revista Española de Pedagogía
Revista Complutense de Educación
Profesorado

Source: Own elaboration based on the data obtained from WoS

The papers with the highest number of citations have been published in *Revista Iberoamericana de Educación Superior* and *Estudios sobre Educación* (Table 6). Since these are recently published articles, they have a small number of citations per paper. They belong to the University of the Balearic Islands and the University of Barcelona.

Table 6. Most cited Spanish authors in publications on oral communication in Scopus

Authors	Year of publication	Article & journal	Number of citations
Gràcia, M., Jarque, M.-J., Astals, M., Rouaz, K.	2020	Development and assessment of communicative competence in initial teacher training *Revista Iberoamericana de Educación Superior* 11(30), pp. 115-136	1
Roso-Bas, F., Pades-Jiménez, A., Ferrer-Pérez, V.A.	2017	Communicative competence: Validation of a scale to assess nonverbal communication during the speech *Estudios Sobre Educación* 32, pp. 95-113	3

Source: Own elaboration based on the data obtained from WoS

No significant differences were found between the number of bibliographic references of these two articles and the number of pages of each article when correlated with the total number of citations per year. However, the differences between the total number of articles published in English and those written in Spanish were statistically significant: $X^2 = 20.100$, $p < 0.001$.

As regards the presence of bibliographic references in the articles from 2010 to 2020, an increase was noted: the average was 27.7 and 32.7 per article during the years 2015-2017 and 2018-2020 respectively (a statistically significant increase according to the Mann-Whitney UTest, $p<.05$).

4. Conclusions

This study has uncovered that there is an increase in the number of articles on oral communication written between 2010 and 2020, particularly highlighting the research production from 2015 onwards. It should be noted that the number of articles on oral communication has not increased to date, and also noteworthy is the fact that only 20 articles were published worldwide in 2020. Most articles signed by Spanish authors were published in three Spanish journals: *Estudios sobre Educación*, *Revista Complutense de Educación* and *Revista Española de Pedagogía*.

We have found differences in the number of articles published between the two databases, Scopus and Web of Science, especially in relation to the number of citations. Unlike Scopus, WoS offers the average number of citations per year, an aspect that is helpful from a statistical point of view, as it has given us a clearer picture of the scientific production on oral communication. Our data confirm the studies carried out by [25] and [26], researchers in other subject areas, who claim that citation data are influenced by the coverage of the database used.

With regard to Spain's position in the rankings of academic publishers on the aforementioned topic, we came to the conclusion that it occupies the second place, just behind the United States. A positive aspect is that Spain exceeds the scientific production of other European and Asian countries.

This study has certain limitations. First of all, the paper has focused exclusively on the "Education" category of the Scopus and WoS databases, which constitutes only a part of the Spanish scientific production in this field, as it does not take into account publications in other areas, such as *Linguistics* and *Psychology*, among others. In future research, it would be worth considering such articles, too. Likewise, the analysis could be extended to include studies published in other databases, namely Dialnet, Latindex, and ERIH Plus, to name but a few.

There are no bibliometric studies analysing the visibility of the scientific production on teaching oral communication and we therefore consider our contribution to be of interest. This analysis serves to raise awareness of the lack of research on the subject and this aspect focuses its relevance.

This bibliometric study has shown that research in the field of oral communication is scarce, despite it being a topic of high importance in spoken language of teaching. One of the limitations of this study worth mentioning is the lack of data regarding the comparison between the articles on oral communication and those on written teaching language. Studies in this field should include more detailed data from other databases in order to allow these experiences to be disseminated nationally and internationally and to enable other teachers to acquire teaching methods that include oral communication strategies, since both them and their students need to develop communicative competences.

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