

# RESEARCH AND INNOVATION IN GEOGRAPHY TEACHING AS PUBLISHED IN THE SPANISH ASSOCIATION OF GEOGRAPHERS BULLETIN: A BIBLIOMETRIC STUDY

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The main aim of this article is to identify the principal lines of research and innovation in Geography teaching through a bibliometric analysis of the *Association of Spanish Geographers Bulletin*. Equally important is the objective of the authors to recognize and understand the areas of interest of researchers and innovators in Geography teaching, define the conceptual reference framework, the most representative methods used and even to risk categorizing the criteria that characterize this field.

The article includes part of the results obtained in a project which includes other means of communication, and in which the scientific community has communicated the latest advances in their research.

The initial obstacle was the limited supply of references on bibliometric research in the field of Geography, and particularly in the field of Geography teaching.

The second problem encountered was the establishment of appropriate categories to analyze and organize the information collected, which would, at the same time, allow the selection of an appropriate framework for selecting articles or other contributions. The experience gained, after consulting different documentation, showed that the definition of these categories would have to depend on the nature of the sources of documents considered.

The third problem encountered was related to the way in which the data would be analyzed and the use of a particular calculation sheet, perhaps not the most scientific, but which would give the most visual transmission possible of the results.

A final difficulty to be overcome was the relatively low number of articles published on Geography teaching. For this reason, the results shown are merely orientative, although this in no way reduces their relevance.

Within the formal analysis, the main proposal was to discover if in the *Association of Spanish Geographers Bulletin*, a journal designed to transmit information on research in

Geography, articles on teaching the subject were included. The starting point for this question was that the Association of Spanish Geographers contributed to the formation of the Geography Teaching Group. Currently, this group is part of the Association, which often includes contributions on Geography teaching in its conferences. Thus, the answer to this question was clearly in the affirmative, in fact of the first 62 issues studied, there were 49 contributions that can be considered to be related to Geography teaching.

Another question dealt with in this work was the time distribution of contributions on Geography teaching; whether they were regularly spaced or more concentrated at certain times. Anticipating the results, the first hypothesis looked for a relationship between articles related to teaching and the development of the school curriculum for Geography.

The results obtained show that articles related to Geography teaching appear at highly irregular intervals. To be more exact, there have been phases of intense scientific productivity in this area, one of which has occurred in recent years, as well as periods of scarcity. There were periods that saw publication of many articles around 1990 and again in 2002. This pattern can be linked to different historical circumstances, such as the change of Education Plan known as LOGSE or the process of reform called European Convergence.

The formal analysis was also aimed at understanding who is more concerned with the teaching of Geography. The research here looked at three different qualities: gender; place of work; and location of the authors. The study on authors publishing articles on Geography teaching in the *Association of Spanish Geographers Bulletin* showed that there is a stronger presence of men (72%) than women (28%). This difference becomes more meaningful when compared to research in other publications where there is not such a marked disparity between men and women.

Authors of articles related to research into Geography teaching are based mainly in universities (90%). It is worth highlighting that from this group of university lecturers, 3% are connected to education faculties. The contributions made by researchers working outside of universities represent only 10% of all articles and are mainly from the area of secondary education. It is evident from the documentary source used that most of the work published is from university based authors. However, research and innovation is carried out in other levels of education but it is transmitted via other communication media.

Having proposed the formal aims of the research, the work was then directed toward the content of the paper. Three principal areas were addressed: *curriculum*; *resources*; and *epistemology*.

The category *curriculum* was used to quantify the contributions connected to the development of study plans from infant school through to university. The analysis of this category was carried out paying particular attention to the educational level referred to in the article. It is worth highlighting that a high percentage of the articles are related to the Geography curriculum in universities. In turn, a distinction was drawn between general university research and that related to teacher training. The majority of articles are related to higher education integrated by the area of university, discounting Magisterio, (44%) y Magisterio (12%). Contributions from the secondary education curriculum represent 19% and from primary education, only 2%. Related to infant education, no articles were found.

Another question which is equally important and also related to the distribution of articles on the development of the Geography curriculum is that of the moment in which the articles

are published. Articles referring to university teaching appear in clusters after the passing of educational laws. However, articles related to non-university teaching generally appear before new legislation is passed, and could therefore serve as references for those creating new educational norms and plans.

The first research on the university curriculum appearing in the *Association of Spanish Geographers Bulletin* in 1980 was related to the modification of study plans, and the search for new employment possibilities. In the years previous to the University Reform Law (1983), study plans were questioned, along with the need to organize them with the objective that graduates would achieve jobs related to Territory Planning and Policy. This question was hotly debated in its initial phase between 1984 and 1987.

The debate on study plans was also helped by the development of a decentralized territorial model, in line with the strengthening of the state in Autonomous Communities. In this context, the debate was centered on two areas.

University lecturers were clearly worried about territorial planning, but trusted that this would represent new professional opportunities to offset the difficulties of finding teaching jobs.

On the other hand, non-university teachers, integrated into teaching innovation groups, questioned the content of the traditional curriculum, teaching methods and teaching resources and materials.

Research on the secondary school curriculum is concentrated in the period just before the passing of the Education System General Organic Law (1990).

The new structure of the curriculum, derived from previous university norms, Organic Law 2001, was not referred to in any articles in the Academic Journal under study in this paper. It is surprising that when the following higher norm was passed, the Quality of Education Organic Law 10/2002, of December 23<sup>rd</sup>, there are no specific articles referring to this in the *Association of Spanish Geographers Bulletin*. Perhaps this can be explained by the fact that this law was only in effect for a short period.

The modification of the previous norm of 2001 with the Organic Law for Universities 4/2007, of April 12<sup>th</sup>, on the other hand, was reflected in a range of publications concerning its effect on the curriculum. This norm, as stated in its preamble, was designed to adapt the curriculum to the new agreements in European higher education that had taken place.

Similarly, an analysis of the curriculum shows the absence of contributions related to Geography teaching in other university study plans such as the Degree in Tourism.

The geographical content which merits special attention from the point of view of teaching has been environmental education. Here there is a close relationship between this subject and education in values. In this sense, it is worth remembering that the development of Geography and its teaching have always been closely tied to the transmission of certain values. Environmental education has been approached from a range of different perspectives. For some the problem has been how to integrate it into the school curriculum, particularly in Geography. For others the question has not been how to include environmental studies in the curriculum, but rather how the Administration managed this question in general. Contributions were also directed at environmental teaching in specific areas, both natural and urban.

The level of preoccupation shown by the number of contributions related to this theme is diametrically opposed to that shown for social questions in Geography teaching, which

could have been manifested in what to teach about the inequalities between some rich and poor nations or inequalities between cities, sexes, etc. and how to teach it. An analysis of this source of academic publications has shown not one article with this type of content, when in reality it is an area of strong interest in Geography, often highlighting specific geographical tendencies, such as social or radical geography.

Within the curriculum, as well as study plans, there is also concern for the way in which Geography is taught. On this particular question only two articles were found referring to basic teaching concepts for Geography: space and countryside.

The way that the subject is taught also depends on materials and resources available. The percentage of publications on *Teaching Resources* was small (10%). This line of research and innovation is one of the most common publication themes in forums specifically dealing with Geography teaching. The contributions collected in the journal studied here tended to show a clear preference for cartography and the incorporation of new technology in the classroom. Cartography is the dominant teaching tool (80%). The analysis of the articles published showed that 40% were related to teaching using traditional cartography and another 40% to digital cartography.

The category *epistemology* quantifies the contributions related to reflections on Geography teaching: questions about content; learning difficulties; adaptation to students' capabilities; influence of geographical trends, etc. Contributions focusing on this area were those that constituted the lowest percentage (4%).

This article highlights the fact that research into Geography teaching in the *Association of Spanish Geographers Bulletin* has centered mainly on curriculum development and to a lesser degree on teaching resources. Research into the nature of the subject itself, the influence of learning theories, methodology proposals, etc. is extremely scarce, as is shown in the percentages.