

MOOC en la educación: Un acercamiento al estado de conocimiento en Iberoamérica, 2014-2017

*MOOC in the Education: An approach to the Knowledge State in Latin America
2014-2017*

*MOOC na educação: uma abordagem ao estado do conhecimento na América
Latina, 2014-2017*

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Resumen

Esta investigación tuvo como objetivo analizar la presencia de los Massive Open Online Courses en educación de Iberoamérica del 2014 al 2017, debido a su alcance pedagógico actual. Fue desarrollada bajo un enfoque metodológico documental, los datos recopilados se obtuvieron de revistas científicas indexadas en su formato digital. En total sumaron 69 artículos estudiados de acuerdo a los criterios de búsqueda establecidos, los cuales fueron clasificados en una base de datos con nueve campos: revista de publicación, título del artículo, país de publicación, objeto de investigación, autor, metodología, volumen, fecha de publicación y dirección electrónica.

Los resultados obtenidos mostraron que España es el país de Iberoamérica con mayor índice de artículos publicados en torno a la educación con 78 %, seguido de Venezuela con 9 %, México 7 %, Chile, Bolivia, Colombia y Costa Rica con 1 %. Asimismo, la mayor concentración de publicaciones se encontró en el año 2015 con 49 % haciendo referencia principalmente al análisis metodológico y pedagógico de los MOOC con 16 % y al análisis comparativo o reflexivo de uno o varios MOOC con 14 %. Entre los artículos analizados sobresale el uso de la metodología descriptiva con 35 % y mixta con 33 % en comparación con las metodologías documental con 20 %, cualitativa con 6 %, cuantitativa y explicativa con 3 %. El número de autores varios de 3 con 43 %, 2 con 29 %, 1 con 26 % y 4 o más autores con 1 %.

De acuerdo al análisis de los datos recabados se pudo inferir que el uso y popularidad de los Massive Open Online Courses es favorecido gracias al avance tecnológico que facilita la incursión de nuevas metodologías educativas acordes a las necesidades de los estudiantes. Esto permite la creación de nuevas áreas de investigación respecto a la incorporación, perspectiva y relevancia de los MOOC en escenarios educativos.

Palabras clave: MOOC, Iberoamérica, educación con MOOC.

Abstract

This investigation had as the objective to analyze the presence of the Massive Open Online Courses in education of Latin America from 2014 to 2017, due to the pedagogic scope that they have in the present.

It was developed under a methodological documentary approach, the compiled information was obtained from scientific magazines and indexed in their digital format obtaining a total of 69 studied articles to the criteria of established by the search. Same that were classified under a database of 9 fields contemplating the magazine of publication, title of the article, country of publication, object of investigation, author, methodology, volume, date of publication and electronic direction.

The obtained results showed that Spain is the country of Latin America with a major index of articles published concerning the education with 78 % followed by Venezuela 9 %, Mexico 7 %, Chile, Bolivia, Colombia and Costa Rica with 1%. Likewise the major concentration of publications met in the year 2015, 49 % referring principally to the methodological and pedagogic analysis of the MOOC, 16 % and the comparative or reflexive analysis of one or more MOOC with 14 %. Between the analyzed articles the use of the descriptive methodology stands out with 35 % and mixed 33 % in comparison with the methodologies documentary 20 %, qualitative 6 %, quantitative and explanatory with 3 %. The number of authors several of 3 with 43 %, 2 with 29 %, 1 with 26 % and 4 or more authors 1 %.

In agreement to the analysis of the obtained information it was possible to infer that the use and popularity of the Massive Open Online Courses meets and was favored thanks to the technological advancement that facilitates the incursion of new educational identical methodologies to the needs of the students. Which allows the creation of new areas of investigation with regard to the incorporation, perspective and relevancy of the MOOC in educational scenes.

Key words: MOOC, Latin America, education with MOOC.

Resumo

Esta pesquisa teve como objetivo analisar a presença dos cursos on-line Massive on-line na educação ibero-americana de 2014 a 2017, devido ao seu atual escopo pedagógico. Foi desenvolvido sob uma abordagem metodológica documental, os dados coletados foram obtidos de periódicos científicos indexados em seu formato digital. No total, 69 artigos foram estudados de acordo com os critérios de pesquisa estabelecidos, que foram classificados em um banco de dados com nove campos: revista de publicação, título do artigo, país de publicação, objeto de pesquisa, autor, metodologia, volume, data de publicação e endereço eletrônico.

Os resultados obtidos mostraram que a Espanha é o país ibero-americano com o maior índice de artigos publicados em educação com 78%, seguido por Venezuela com 9%, México 7%, Chile,

Bolivia, Colombia e Costa Rica com 1%. Da mesma forma, a maior concentração de publicações foi encontrada no ano de 2015, com 49% referentes principalmente à análise metodológica e pedagógica dos MOOCs com 16% e à análise comparativa ou reflexiva de um ou vários MOOC com 14%. Entre os artigos analisados, o uso de metodologia descritiva com 35% e mesclado com 33% em comparação com metodologias documentais com 20%, qualitativo com 6%, quantitativo e explicativo com 3%. O número de autores variou de 3 a 43%, 2 com 29%, 1 com 26% e 4 ou mais autores com 1%.

De acordo com a análise dos dados coletados, foi possível inferir que o uso e a popularidade dos cursos Massive Open Online são favorecidos graças ao avanço tecnológico que facilita a incursão de novas metodologias educacionais de acordo com as necessidades dos alunos. Isso permite a criação de novas áreas de pesquisa sobre incorporação, perspectiva e relevância dos MOOCs em cenários educacionais.

Palavras-chave: MOOC, América Latina, educação com MOOC.

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Introduction

One of the main objectives of education is to offer quality content that allows the student to acquire skills to work in the workplace, using the different pedagogical and technological tools available. Thanks to the technological advances, the range of tools available is very broad, for example, there are the Massive Open Online Courses (MOOC), however, its name has not yet been standardized and therefore in Spanish this type of courses can also be called Large Scale Open Course, Large Scale Open Course or Large Scale Online Course.

The term MOOC was coined by Dave Cormier and Bryan Alexander in 2008; therefore, its definition is very recent and there are still doubts about its concrete meaning. The concept is so

broad and ambiguous that there are even discussions about whether MOOCs are really a course or a kind of improved teaching text (Pernías and Luján, 2014).

The MOOCs provide new experiences in online training and promote awareness of the training needs of the so-called digital era, promoting the use of open and flexible content.

The MOOCs have produced a beneficial effect on the relevance of virtual teaching-learning environments in higher education and have responded to a significant social demand for specialized training. In addition, they have contributed to the reflection on the need for a redefinition of the current teaching roles and given the student a greater role in the evaluation process of their learning (Valverde, 2014).

Different authors have conceptualized the MOOC for some years, analyzing mainly the use and satisfaction of these at present, however, it is still necessary a critical vision about them that allows analyzing its characteristics, advantages and implications in the pedagogical field.

From the educational point of view, there is no doubt that they have had a great influence on educational processes and that they offer some advantages, since they contribute to redefine the teaching roles and allow the student to play an active role in the evaluation and (Vidal, Listovsky, Zacca, Díaz, De García, and León), as well as to offer more flexible and open academic offerings, highlighting the need to adapt teaching methodologies to the characteristics of the networked society. , 2016).

In recent years, the presence of MOOCs in education has increased since several universities have seen their educational potential by offering this type of courses as a pedagogical complement. In this way, the participation of prestigious educational institutions, international organizations and research centers have allowed this type of courses to have high quality content and also develop a great variety of skills and competences useful in the labor and business market.

These have become an educational option for those students who do not have the time or the availability of attending face-to-face courses, they also represent a training and updating option for professionals who wish to acquire new skills in their areas of work or even in areas completely different. In this sense, MOOCs expand access to reliable, up-to-date and open information that meets specific learning needs.

The implementation of this type of courses as a complement to the teaching-learning process is supported thanks to new educational methodologies where the student is the creator of his own knowledge and the teacher acts only as a facilitator. This, together with the growing technological advance, leads to the creation of new learning scenarios, including the use of open resources.

Objective

Analyze the presence of the Massive Open Online Courses in Iberoamerican education from 2014 to 2017.

Research Question

What is the presence of the Massive Open Online Courses in the education of Latin America from 2014 to 2017?

Method

For the development of this research, the documentary methodological approach was adopted, which facilitated the analysis of articles published in digital scientific journals appropriate to the research axis. Taking into account that the objective of this research is to analyze the educational vision of the MOOCs in Ibero-America, it was determined to analyze only articles published in the scientific journals Redalyc,¹ Journal of Distance Education (RED), Ibero-American Journal of Distance Education (RIED), Journal of Curriculum and Teacher Training (Teachers), Journal of

¹ Las Revistas analizadas en el Repositorio digital Redalyc son: Revista Interuniversitaria de Formación del Profesorado, Revista electrónica "Actualidades Investigativas en educación", @Tic Revista d'innovacio educativa, Ra Ximhai, Educación XXI, RUSC Universities and Knowledge Society Journal, Universidad de Salamanca España y Unión de universidades de América Latina y el Caribe Organismo Internacional.

Educational Innovation (Open), Scientific Journal of Communication and Education (Communicate) and Option.

This selection of journals analyzed was delimited according to the articles published according to the purpose of the research, mainly considering the educational approach of the MOOC, the geographical delimitation corresponding to Ibero-America, the temporal delimitation covering the period from 2014 to 2017 and the language considering only those published in Spanish. All this because of the large amounts of information that are on the internet and that refer to the MOOC, either in the title or in the content.

Throughout the research process theoretical methods were used as:

- Documentary compilation of various electronic articles that allowed the collection of useful data in its development.
- Analysis and synthesis of the documents compiled for the development of the research content.
- Induction and deduction for the formulation of the final considerations and conclusions.

Process

The first step was to investigate in the selected journals all articles related to the MOOCs published in the Spanish language in the period previously established. Publications were taken into account the country of origin, date of publication, topics covered, methodology used and main findings.

The second step in the search for information consisted of the application of some filters such as MOOC, massive courses, free open courses, b-learning environments and massive online courses. Once the articles were chosen a database was created to facilitate the descriptive analysis of each one in particular and later as a whole. For the creation of the latter, the following fields were taken into account: publication journal, article title, country of publication, object of research, author, methodology, article / volume number, publication date and electronic address.

In each of the reviewed journals several articles on the MOOCs were found, so it was necessary to classify them by categories to better understand these publications. The categories assigned are as follows: Design and creation of a MOOC, Methodological and pedagogical analysis of the MOOCs, Comparative / Explanatory Analysis of one or more MOOCs, Challenges of the MOOCs and their incorporation in the educational field, Perception of students Regarding MOOCs, Analysis of MOOCs as support or updating teachers, Educational relevance of MOOCs, Conceptual review and evolution of MOOCs and Others.

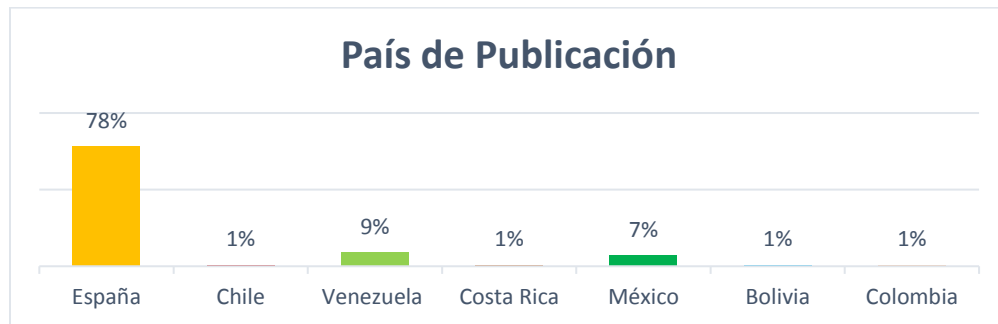
Finally, we proceeded to graph the data obtained according to the filters, categories and analysis of the thematic. Once these tangible data were obtained, they were interpreted and the development of the body of the essay was obtained, obtaining as final product an article that denotes the presence of the MOOC in the educational field in Latin America.

Results

The collected data were collected in 7 scientific journals indexed in electronic format, obtaining a total of 69 articles published between 2014 and 2017, which met the mentioned search criteria (see Annex 1). Thus, it is considered that the information collected was representative of the educational vision of the MOOC in Latin America.

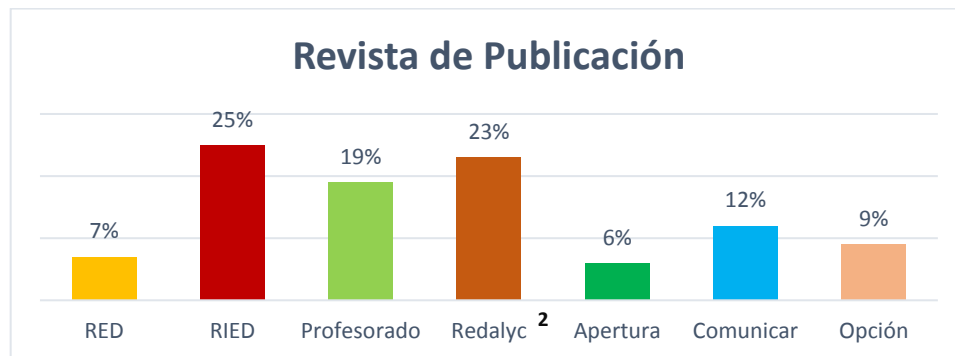
Then, we proceeded to graph the results obtained from the analysis of this investigation, which are shown below:

Graph 1. Artículos publicados por País.



Fuente: Elaboración propia.

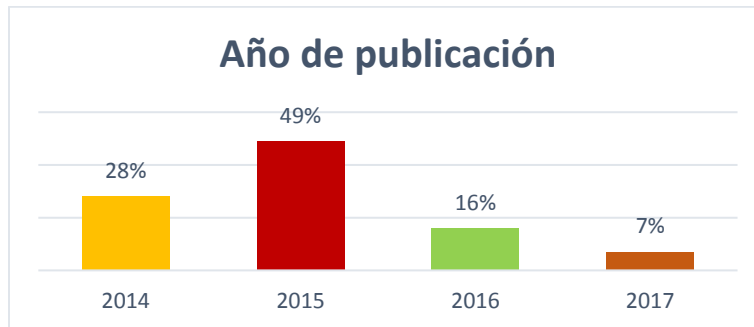
Graph 2. Artículos publicados por Revista.



Fuente: Elaboración propia

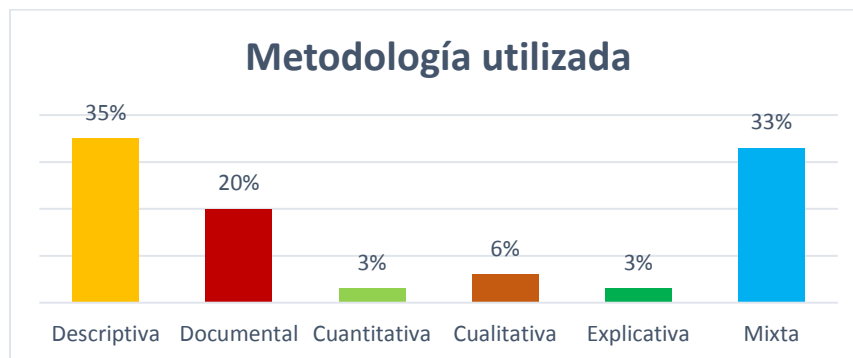
² Las Revistas analizadas en el Repositorio digital Redalyc son: Revista Interuniversitaria de Formación del Profesorado, Revista electrónica “Actualidades Investigativas en educación”, @Tic Revista d’innovació educativa, Ra Ximhai, Educación XX1, RUSC Universities and Knowledge Society Journal, Universidad de Salamanca España y Unión de universidades de América Latina y el Caribe Organismo Internacional.

Graph 3. Artículos publicados por Año



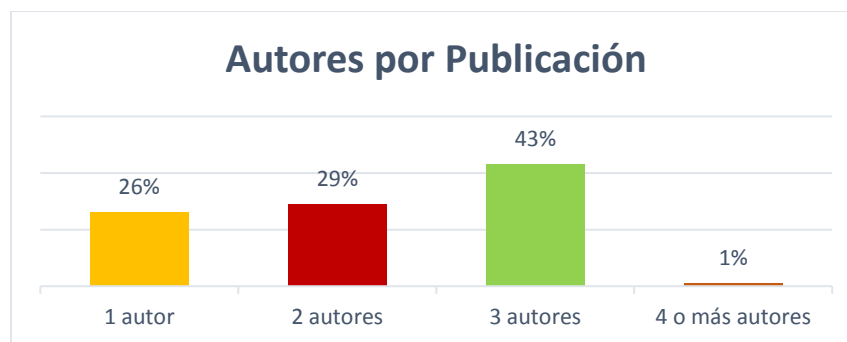
Fuente: Elaboración propia

Graph 4. Artículos publicados de acuerdo a la Metodología.



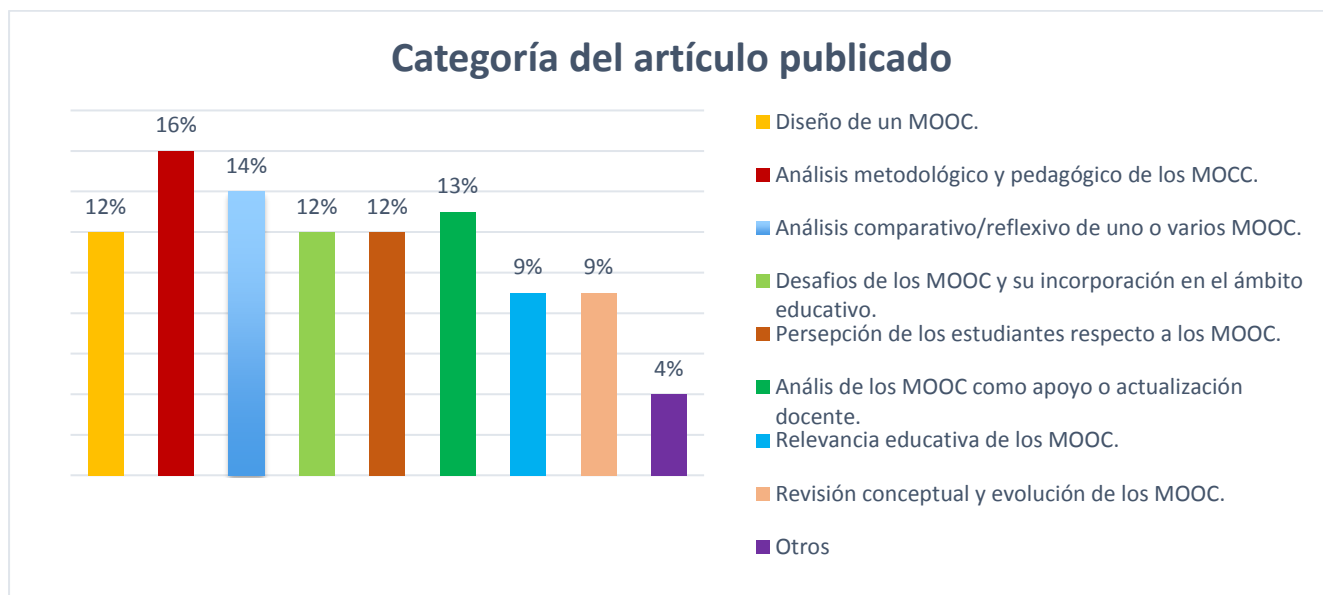
Fuente: Elaboración propia

Graph 5. Artículos publicados por Número de autores



Fuente: Elaboración propia

Graph 6. Artículos publicados por Categoría.



Fuente: Elaboración propia

Discussion

Analyzing the approach to the state of knowledge in Ibero-America in terms of the educational perspective of the MOOC in publications from 2014 to 2017, it can be observed that Spain is the country with the highest percentage of articles published with 78%, followed by Venezuela with 9% , Mexico 7% and Chile, Bolivia, Costa Rica and Colombia with 1%. In this sense, these percentages do not reflect the use of MOOCs in each country, but rather the research carried out and published regarding their use.

Similarly, Mengual, Vázquez and López (2017) found that Spain has 10.6% of publications in relation to MOOCs compared to other countries, however, its study includes the United States, United Kingdom, China, Australia, Canada, India , France and Germany from 2012 to 2016.

As for the scientific journals analyzed, it was determined that the majority of articles published correspond to the Ibero-American Journal of Distance Education (RIED) with 25% followed by Redalyc with 23%, Teachers Journal of Curriculum and Teacher Training 19%, Communicating

Scientific Journal of Communication and Education 12%, Option 9%, RED Distance Education Magazine 7% and Opening of Educational Innovation Magazine 6%.

Another study carried out by Lorenzo García Aretio (2017) states that since 2012 to date the Ibero-American Journal of Distance Education (RIED) has published a total of 30 scientific papers related to the MOOC phenomenon, consolidating itself as the Spanish magazine with the highest number of publications regarding the MOOCs.

The concentration of publications per year was made in 2015 with 49%, in 2014 with 28%, in 2016 with 16% and in 2017 with 7%, and it is expected that from now on increase the number of publications. As for authors by article, the results showed that 43% corresponded to three authors, 29% to two authors, 26% to one author and 1% to 4 or more authors. It should be noted that in some articles where more than two authors participated, these were from different educational centers and even from other countries.

Contrary to the above, Mengual, Vázquez and López (2017) established the year 2016 as the most predominant in scientific productivity compared to the MOOC with a total of 55 papers published in the form of press and digital articles, equivalent to 63.2% in its study within the period 2012-2016.

The methodologies used in the analyzed articles varied, being the Descriptive methodology the most used with 35%, followed by the Mixed with 33%, Documentary 20%, Qualitative 6%, Quantitative 3% and Explanatory 3%.

López, Vázquez and Román (2015) establish that the methodological approach of the articles is a value that gives us an overview of how the research and reflection on the MOOC movement is being tackled in this initial and expansion phase.

Within the categories covered in the articles, the Methodological and Pedagogical Analysis of the MOOCs is the most outstanding with 16%, followed by the Comparative / Reflective Analysis of

one or several MOOCs with 14%, Analysis of the MOOCs as support for the update teacher 13%. On the other hand, the MOOC design, the MOOC Challenges and its incorporation in the educational field, as well as the Perception of the students regarding the MOOC, share 12%.

In the article "Evaluation of didactic digital competences in open mass courses: Contribution to the Latin American movement", it is argued that the evolution of the MOOC movement in Spain by area of knowledge has mainly focused on the area of Education Sciences, which accounts for 89.5 % of articles published and 75% of books in total publications (Aguaced, Vázquez y López, 2016).

On the other hand, López, Vázquez and Román (2015) in the article "Analysis and implications of the impact of the MOOC movement on the scientific community: JCR and Scopus", mention that the MOOC phenomenon becomes an emerging research opportunity for years in three priority areas of research: technological architecture (models and tools serving the masses), criticisms of the pedagogical model and the principles on which it is based (monetization, evaluation and accreditation, etc.) and implications for rethinking the offer and the educational model of higher education.

In the research carried out by Aguaced, Vázquez and López (2016), it is mentioned that the MOOC movement, like any science or field of study, requires processes of recovery, evaluation and analysis that provide the possibility of visualizing and representing comprehensively, consistent, relevant and precise the result of its work and that assures the legitimacy and originality of the scientific knowledge produced.

In this sense, the article "Design and implementation of open mass online courses (MOOC): expectations and practical considerations", states that the MOOC can not be conceived as the only alternative to teaching practice and the academic requirement of university studies, although they can bring institutions closer to students of other levels or with other interests and motivations (Méndez, 2013).

CONCLUSIONS

The present research has analyzed the scientific production with respect to the MOOC in the education of Latin America from 2014 to 2017, allowing with this to construct the following reflections:

- In each of the articles analyzed it was possible to see that these types of courses are gaining a presence and status in the educational field, allowing students to acquire several cognitive skills necessary in the new socio-labor environments.
- The publications regarding the MOOC in Ibero-America have a great impact in the educational field due to the use and advantages that they contribute, as well as to the perception and acceptance on the part of the students. This entails important methodological and pedagogical changes in the teaching-learning process within this type of virtual learning environments.
- Several articles analyzed emphasize the benefits of using MOOCs in education as a tool to support pedagogical processes, even as a means to facilitate teacher upgrading. And although some suggest educational platforms in particular for the implementation or follow-up of a course, the results suggest that it is the user who must compare the feasibility of these to choose the one that best meets their educational needs.
- From this perspective, MOOCs should not be seen as substitutes for teaching educational practice; on the contrary, can be considered as a valuable formative complement since the learning in this type of courses is not defined by the technology used but the pedagogical approach that is given to the use and implementation of such elements.
- Finally, the results presented indicate that this type of courses are in an area of growth, acceptance and implementation by educational and business entities. It is expected that the publication of scientific literature will increase to achieve a greater global impact and a better use of this type of initiatives in the immediate future.

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Anexo 1: Artículos analizados

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