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Intercultural competencies development for professional collaboration: a systematic literature mapping from 2016 to 2021.

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Undoubtedly, we live in an increasingly interconnected world, where physical borders have ceased to impede interrelationships and collaborative work of people coming together to solve various global problems. This raises the question: how can we promote effective collaboration among professionals with different cultural references? This article aims to share the evidence analyses published from 2016 to July 2021 about forming intercultural competencies to promote professional collaboration. The method was a systematic mapping of the literature in the Scopus and Web of Science databases, with 325 articles identified from the search strings. The findings show that this collaborative work is relevant in academic studies, and English-speaking countries mainly produce research in this area. The most recurrent context for the research is higher education, and the primary competency present in the inquiries is intercultural communication. This systematic mapping provides a framework for identifying less significant challenges and contexts also, such as assessing learning and the influence these competencies exert on global and multicultural collaborations. The mapping also establishes a database of studies that can support future studies in this line of research.

CCS CONCEPTS • Social and professional topics • User characteristics • Cultural characteristics

Additional Keywords and Phrases: intercultural competence, higher education, international education, professional collaboration, systematic mapping, educational innovation

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1 INTRODUCTION

Over the years, the advances in information technologies have made it possible to network with people anywhere in the world. Distance study, remote work, and the multiple possibilities of virtual collaboration demand initiative and the obligation to understand and speak the languages of those with whom there is multicultural dialogue or interaction. Within the framework of the 17 Sustainable Development Goals (SDGs) of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the need for strong international cooperation through "partnerships to achieve goals" [1] is declared. Ramírez-Montoya and García-Peñalvo [2] highlight open and collaborative citizen science so co-construction and innovation can be contributed to public and private spheres. Although meaningful international collaborations have occurred, it is still essential to generate global citizenship in individuals, which leads to this voluntary search for worldwide collaborative efforts.

Intercultural competencies are comprised of differentiated contextual knowledge. According to Leeds-Hurwitz [3], *intercultural competencies* refer to having sufficient and relevant knowledge about particular cultures to prepare for intercultural dialogue. Interaction implies an even deeper understanding [4]. It requires developing awareness and knowledge of different worldviews and the behavioral flexibility to deal with them [5]. Moreover, *intercultural communication* refers to understanding and expressing appropriate words and communication concepts that make sense to the speaker/actor and others [3]. On the other hand, *intercultural sensitivity* refers specifically to understanding that differences and possible challenges arise when interacting with people from different cultures [6]. Finally, *intercultural responsibility* encompasses the moral expectations and values that describe how individuals participate with others in encounters and intercultural exchanges [7].

Technological developments facilitate communication. Technological progress and the characteristics of the current generations have led to significant changes in educational models and the need for people to adapt to changing conditions. Hamdan et al. [8] and Campbell [9] state that it would be advisable for students to consider it is worth the initiative to communicate and work with international students. They most likely believe that intercultural interactions will be relevant to them in their future lives, so educators should emphasize that they should not wait until after graduation to develop these competencies.

The objective of this study was to analyze the recently published scientific evidence about intercultural competencies development for professional collaboration, focusing on the research that has been carried out in this area and analyzing its content in terms of the characteristics and themes addressed. To do this, we performed a systematic mapping of the articles published from January 2016 to July 31, 2021, following the steps established for this process. With the results obtained and their analyses, we present an overview of the state-of-the-art on developing intercultural competencies and identify gaps and possible areas of opportunity for future research.

2 RESEARCH METHOD

For this work, we opted for a systematic literature mapping study (SLM), which consists of a broad review of primary studies of a specific thematic area to identify the evidence on the topic in question [10]. Doing this provides an overview of the available literature before carrying out a systematic literature review (SLR). In a systematic mapping of literature, the same data search and extraction are used as for an SLR [11]. The main objective is to identify, classify, and analyze the database of scientific publications obtained to find knowledge gaps in the research on the central topic [12]. To present a good argument identifying these gaps and to define the research needs, one must determine the thematic area of the problem and perform a critical and exhaustive review of the literature both in an SLM and an SLR [13]. The success of the systematization method depends on the precise execution of each

stage of the process. Based on what Kitchenham and Charters [10] established, the three main review phases are planning the review, conducting the review, and reporting it. Based on the ideas described by various authors in previous systematic mapping studies [14, 15, 16], Figure 1 shows the phases for this study and the steps associated with each.

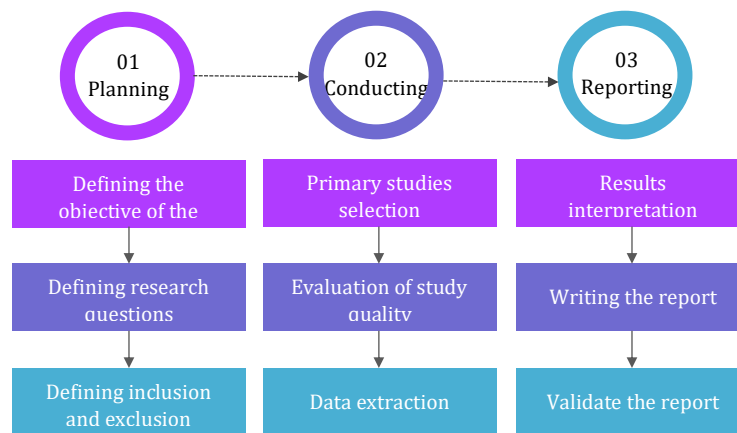


Figure 1: Process for the review

2.1 Planning

The first phase described for systematic literature mapping consists of planning the study. Since the topic to be investigated, "professional development of intercultural competencies," is recent, we found no mappings or systematic literature reviews. Thus, we saw the need for a broad perspective of the subject and performed a systematic mapping of the literature, leading to formulating the study's research questions (Table 1). Four inclusion criteria were determined (see Table 2). We decided to review the studies published since 2016 to have the most current scientific production database for this SLM. To have a high-quality study, we chose only articles published in high-impact journals.

Table 1: Research questions

Question	Type of response sought
RQ1: How many studies are in the Scopus and WoS databased from 2016 to July 31, 2021?	Number of articles in Scopus
	Number of articles in WoS
	Number of duplicated articles
	Number of the theoretical-conceptual articles

RQ2: What is the geographical distribution of the article's provenance?	Number of empirical scientific articles
	Number of qualitative research studies
	Number of quantitative research studies
	Number of mixed research studies
RQ3: What are the journals with more publications on this line of research?	Country of article's provenance
RQ4: In what contexts are these studies developed?	Journal Q1, Q2, Q3 or Q4
	Academic (continuous, higher, secondary, elementary), social or business

Table 2: Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria	Quality criteria
Scientific articles	Not scientific articles	A contribution regarding intercultural competencies
Articles published from 2016 to July 31, 2021	Articles not published from 2016 to July 31, 2020	Coherence between the objective, method, and results
Studies on intercultural competencies development	Studies that not work on intercultural competencies development	
Articles published in high-impact journals	Articles that have not been published in high-impact journals	

2.2 Conducting

For the second phase of this systematic literature mapping study, we searched articles in databases that ensure access to high-impact journals such as Scopus and WoS. To establish more specific search terms, we read and analyzed articles related to developing intercultural competencies in higher education to identify commonly used concepts in the subject. We searched for articles using terms such as "intercultural competency," "higher education," and "collaboration." Next, we refined the search by limiting categories or thematic areas and language (Spanish and English). In addition, previously established inclusion criteria were applied, including the type of studies and the time range (from 2016 to July 31, 2021). The following are the search strings used in the two databases.

Scopus

"intercultural competence" AND "higher education" AND "collaboration" ("professional" OR "multicultural" OR "training") AND (LIMIT-TO (DOCTYPE,"ar")) AND (LIMIT-TO (PUBYEAR,2021) OR LIMIT-TO (PUBYEAR,2020) OR LIMIT-TO (PUBYEAR,2019) OR LIMIT-TO (PUBYEAR,2018) OR LIMIT-TO (PUBYEAR,2017) OR LIMIT-TO (PUBYEAR,2016)) AND (LIMIT-TO (LANGUAGE,"English") OR LIMIT-TO (LANGUAGE,"Spanish"))

WoS

((ALL=(Intercultural competence)) AND ALL=(higher education)) AND ALL=((collaboration OR professional OR multicultural OR training)) and 2016 or 2017 or 2018 or 2019 or 2020 or 2021 (Publication Years) and Articles (Document Types) and English or Spanish (Languages) and Emerging Sources Citation Index (ESCI) or Social Sciences Citation Index (SSCI) or Science Citation Index Expanded (SCI-EXPANDED) or Book Citation Index – Social Sciences & Humanities (BKCI-SSH) or Arts & Humanities Citation Index (A&HCI) (Web of Science Index)

Once obtained, the results were imported into a reference management program to begin cleaning the database. First, the duplicate articles found in both databases were eliminated. The inclusion and exclusion criteria were then applied, resulting in 325 articles that met the requirements for this study (Figure 2).

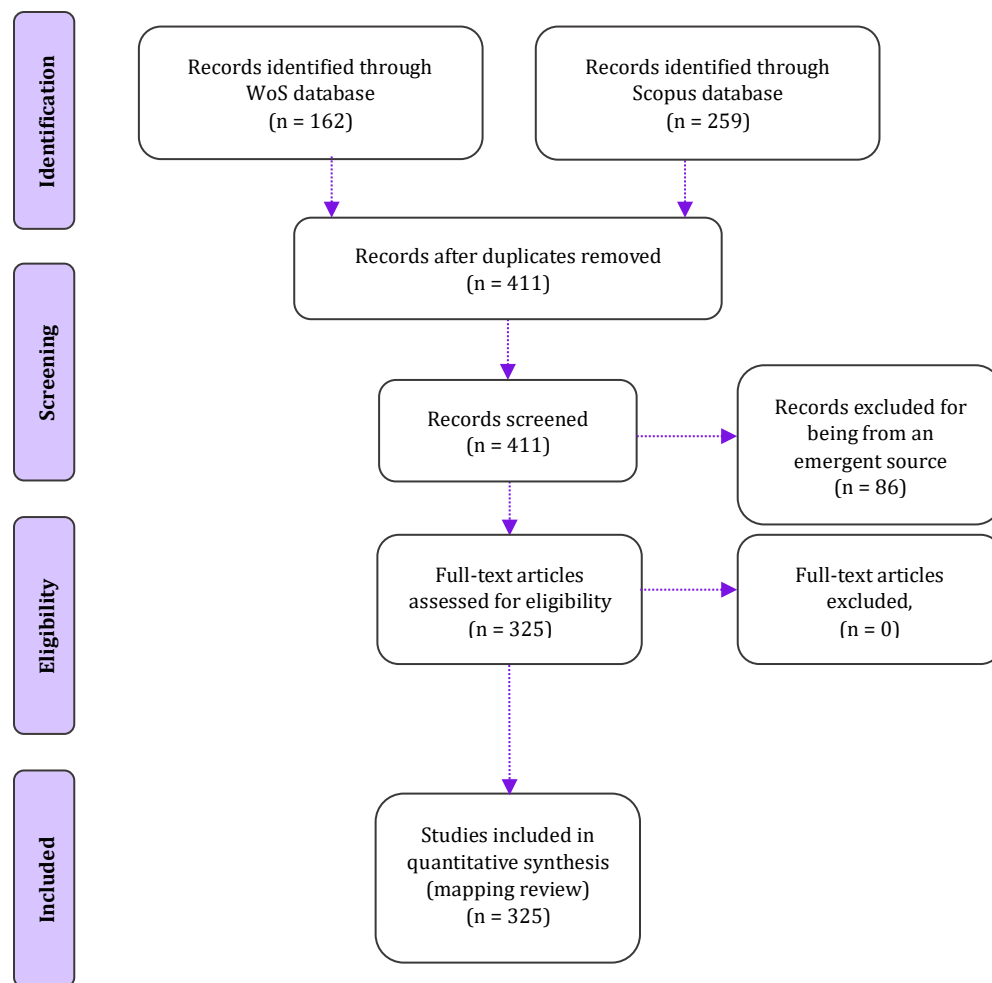


Figure 2: Review phases

The articles that were selected were analyzed based on the study's research questions. Since most were carried out in an academic context and the objective was to analyze the development of intercultural competencies, we decided to specify the academic level of each article (Figure 3).

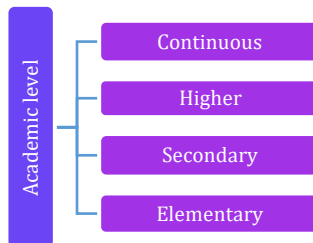


Figure 3: Academic classification

3 RESULTS

This section summarizes the results based on the research questions applied to the 325 analyzed articles.

RQ1: How many studies are in the Scopus and WoS databases from 2016 to July 31, 2021?

or this study, 255 articles were found and selected in Scopus, of which 213 were empirical studies and 42 corresponded to theoretical studies. In WoS, 70 were found and selected, of which 61 were empirical studies, and nine were theoretical studies (Figure 4). The complete database is available [here](#). Figure 5 shows the number of studies conducted with each of the three research methods: quantitative, qualitative, and mixed. N/A (not applicable) indicates the number of non-empirical studies.

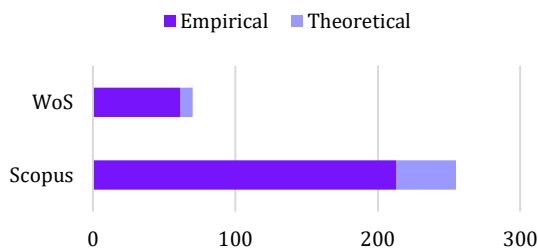


Figure 4: Research type of the studies

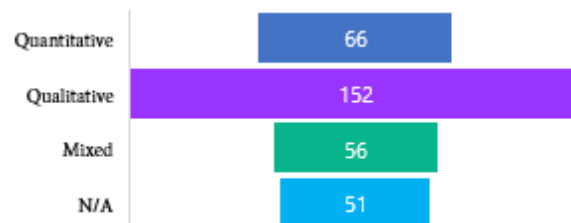


Figure 5: Research method of the studies

RQ2: What is the geographical origin of the articles?

The geographical distribution of the articles allows us to know in which countries there is the most interest in researching the subject in question, in our case, the development of intercultural competencies to promote professional collaboration. Figure 6 shows a map with the highest number of published studies associated with each country.

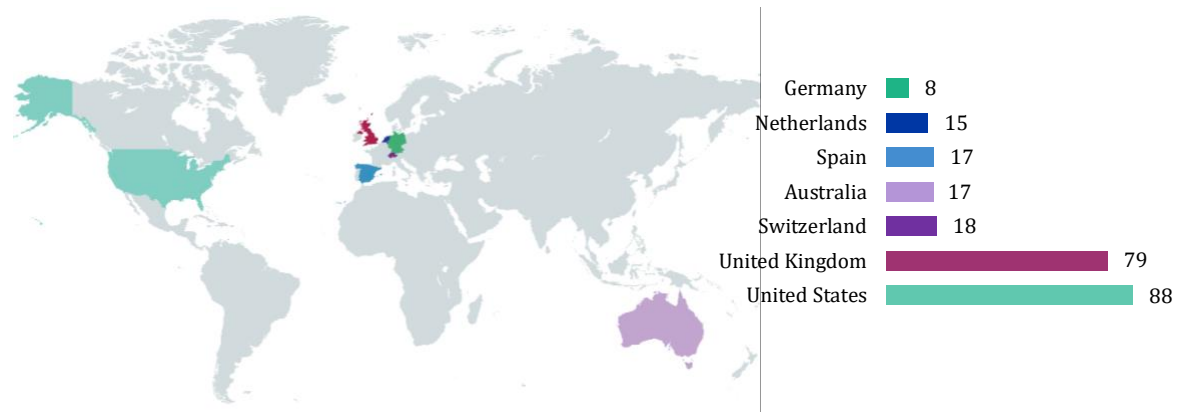


Figure 6: Geographical distribution of studies

RQ3: What is the quartile of the journals with the most publications in this line of study?

The journals with the most published articles show a panorama of interest in publishing about the development of intercultural competencies. Table 3 identifies the name of the journals, the quartile (Q1, Q2, Q3, Q4) to which it belongs, the number of studies published, and the identification number of each article in our analyzed database.

Table 3: Journals with more articles published

Journal	Quartile	Articles	Article identification number
Journal of Studies in International Education	Q1	13	[22, 31, 72, 73, 190, 208, 216, 265, 271, 272, 291, 315, 319]
Journal of Multilingual and Multicultural Development	Q1	8	[213, 214, 256, 263, 266, 279, 313, 318]
Sustainability	Q1	8	[4, 6, 46, 54, 56, 123, 143, 281]
International Journal of Intercultural Relations	Q1	6	[7, 40, 178, 186, 189, 259]
Computer Assisted Language Learning	Q1	5	[39, 182, 204, 227, 228]
Intercultural Education	Q1	5	[36, 241, 285, 301, 323]
Language and Intercultural Communication	Q1	4	[114, 188, 308, 321]
Language Learning and Technology	Q1	4	[47, 158, 162, 255]
Teaching and Teacher Education	Q1	4	[41, 65, 94, 209]
Education Science	Q2	4	[15, 109, 164, 288]
Foreign Language Annals	Q2	4	[44, 52, 197, 295]
Internet and Higher Education	Q1	3	[136, 137, 201]
Journal of Intercultural Communication Research	Q1	3	[121, 154, 170]
International Journal for Academic Development	Q1	3	[133, 211, 322]
Journal of Vocational Education and Training	Q1	3	[42, 134, 147]
ReCALL	Q1	3	[62, 92, 289]
International Journal of Environmental Research and Public Health	Q2	3	[16, 60, 261]
Journal of Intercultural Communication	Q2	3	[172, 194, 234]
Journal of International Students	Q2	3	[106, 198, 302]
Nursing and Health Sciences	Q2	3	[53, 112, 180]
Research in Comparative and International Education	Q2	3	[67, 103, 104]

RQ4: In what context is the study developed?

Of the 325 articles analyzed, five were developed in a business context, eight in a social context, and 312 were conducted in an educational environment (Figure 7). So, to have a more specific vision of the framework for the intercultural competencies in each study, we decided to specify the academic level at which it was carried out. Figure 8 shows the specific academic levels.

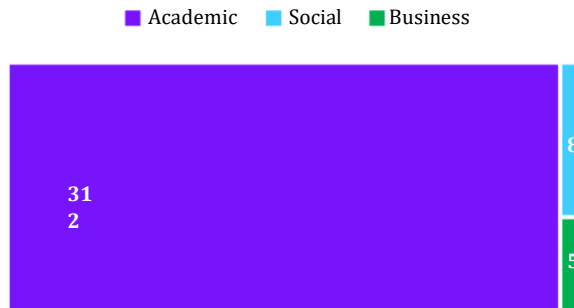


Figure 7: Context in which the studies were carried out

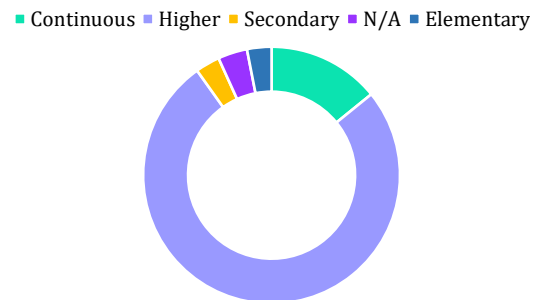


Figure 8: Specific academic level

4 DISCUSSION

Developing intercultural collaboration is of high current interest to researchers; they analyze or approach this area from different perspectives and provide empirical evidence of great value for future studies. Figure 4 shows the high percentage of studies (84%) that are empirical. Given that the formation of intercultural competencies has become increasingly relevant in higher education, as shown in Figure 8, it is necessary to investigate how to evaluate the effectiveness of competency-building strategies for professional performance. Figure 5 shows that most of the empirical research methods used are qualitative (55%) or quantitative (24%). Based on Table 3, it can be determined that the journals with the highest number of publications in this line of research are those specialized in intercultural, multicultural, and international academic studies. Also, the countries most interested in this issue are the United States and the United Kingdom (Figure 6).

5 CONCLUSIONS

The development of intercultural competencies allows the individual to know and understand different cultures to interact and relate well in different multicultural environments [17]. From this analysis, we could determine that, although many research studies in this thematic area were found in several high-impact journals of quality, more research is needed in the field. The limitations of this study are that only two databases were consulted, which could have restricted the scientific evidence reviewed, as well as the restriction of the terms used in the search and the slight difference in the string used for each database. In addition, it should be considered that the specific contextual classifications were the authors' decisions.

In conclusion, this article presents a synthesized view of the state-of-the-art of research on intercultural competency development for professional collaboration and invites scientific inquiry into possible topics not yet fully explored.

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