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# A bibliometric review of research on English as a medium of instruction (EMI), 1974–2022

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## ABSTRACT

This bibliometric review employs science mapping to trace the development of the EMI-related literature and obtained 1378 relevant Scopus-indexed documents published between 1974 and 2022. The study uses co-author analysis, coupling analysis and co-occurrence analysis to reveal the co-authorship network, the most prolific authors, and the most commonly researched EMI topics. The result reveals a rapidly growing publication trajectory since the 2000s when global internationalisation became prominent. However, the overall outgrowth reaches a modest comfort. While this literature is worldwide in scope, publications in four countries – the United Kingdom, Hong Kong, Spain, and the United States – provided the most significant publications. Authors with the most publications and citations also come from these countries.

## ARTICLE HISTORY

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## KEYWORDS

English as a medium of instruction; EMI; internationalization; higher education; science mapping; bibliometric review

## Introduction

Globalisation has become a trend that affects all fields ranging from economics to science and education (Marginson 2010). Under the influence of globalisation, every phase of education, notably higher education, becomes a traded commodity on the international knowledge economy market through negotiation and exchange activities between countries. The internationalisation of higher education has become a significant trend, chosen by many higher education systems and considered favourable for development and integration among the global intelligentsia (Altbach 2002). According to Altbach (2004), internationalisation has allowed educational institutions to extend their development while globalisation is an inevitable and unchangeable trend. Although internationalisation is optional, it has been rare for any country to avoid the internationalisation of higher education. Therefore, the internationalisation of higher education has flourished and developed strongly, including multinational treaty agreements on higher education, joint research and teaching activities, cross-border teaching, programmes for international students, and the establishment of branches of universities abroad (De Wit 2002). Altbach and Knight (2007) also states that internationalisation is a vital force promoting the development of higher education at an international level. The development of information technology and English as a common language in international communication has made academic exchange between countries more accessible.

Therefore, throughout the internationalisation of education, using English when teaching has been an across-the-board phenomenon, with extensive coverage reaching all educational stages

(Macaro et al. 2018). It heralds an era of such massive ‘Englishization’ that an array of other relevant but independent phenomena arose directly from it, such as CLIL (Content and Language Integrated Learning), EAP, ESP, ETPs, ELF, EFL and ESL. There have been many complications associated with these multiple approaches. For example, it is easy to confuse EMI with CLIL because both approaches share the exact keywords in ‘content’ and ‘language’. However, many researchers indicate that they serve different purposes. Specifically, the CLIL approach is ‘a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language’ (Coyle, Hood, and Marsh 2010, 1). Coleman (2006, 4) defined CLIL as ‘Parts of the curriculum are delivered through a foreign language. Learners acquire the target language naturalistically’. In contrast, in the EMI approach, ‘the use of English to teach academic subjects in countries or jurisdictions where the first language (L1) of the majority of the population is not English’ (Dearden 2014, 6). Unterberger and Wilhelmer (2011) emphasises that what students gain in the CLIL approach does not guarantee their success in EMI classes at the higher education level because CLIL or even its post-secondary version, ICLHE (Integrating Content and Language in Higher Education), is not likely to match the majority of higher education contexts.

Coleman (2006) states that the rationale for higher academic institutions adopting EMI is not to develop students’ language proficiency but due to the increasing effects of internationalisation. It might also lead to a pragmatic insistence that EMI is often attached to higher education settings instead of other educational phases (Altbach and Knight 2007; Fenton-Smith, Humphreys, and Walkinshaw 2017), furthermore, English serves as the *lingua franca* for academia. EMI remained the preferred choice of higher academic communities like universities. That is, when English is seen as a *lingua franca* in an EMI setting, learners are accepted to having code-switching, if necessary, instead of being restrictedly using the required language, for instance, in the context using English as a Foreign Language (Jenkins 2011). Unterberger and Wilhelmer (2011, 95) highlighted that the central focus of EMI is ‘on students’ content mastery, and no language aims are specified’. It reflects that many Anglophone universities aim for an international reputation by using their available English courses to attract non-English international students. However, Hultgren (2014) specifies that direct interconnections between high-ranking universities and their use of EMI remain implicit. Dearden (2014) shows that organising EMI programmes are not the only factor in fulfilling international criteria. Therefore, Dearden (2018) claims that because EMI programmes are automatically attached to the symbol of internationalisation, many higher education institutions automatically organise them without adequate preparation. That is to say, the importance of an effective EMI programme seems belittled.

Some investigations concern how using the first language (L1) as a medium of instruction tends to quickly get overshadowed by adopting English as the second language (L2) and the primary instruction medium (Dearden and Macaro 2016; Doiz, Lasagabaster, and Sierra 2011). Different case studies present one of the most fabulous challenges instructors, and their students face, mainly due to poor language skills (Byun et al. 2011; Doiz, Lasagabaster, and Sierra 2012; Hendriks, van Meurs, and Reimer 2018; Huang 2015). In considering these dimensions, Shimauchi (2018) questions the standard of English proficiency of both students and their instructions in EMI programmes. Lei and Hu (2014) have expressed their disquiet about the effectiveness of language certificates such as IELTS or language national tests. The authors raise concerns about EMI lecturers’ ability to teach English even though they earn their academic degrees from offshore education. Schmidt-Unterberger (2018) and Dearden (2018) emphasise involving students in ESP/EAP courses side by side or before receiving EMI curricula to equip students with the academic language necessary for specialised subjects.

During the period between 1974 and 2022, a few studies provide an overview of the development of EMI practice in the Scopus database. These documents (Macaro et al. 2018) are a reasonably comprehensive analysis of EMI aspects such as the definition of EMI, the growth prospects across the world (mainly focused on Europe, The Middle East and Asia) or the opinion of teachers and students towards EMI. The remaining reviews mainly focus on specific issues, such as examining

the impact of online technologies on the teaching of English-language subjects at universities (Querol-Julián and Camiciottoli 2019) EMI-related attitudes surrounding EMI in East Asia and the Gulf (Graham and Eslami 2019); comparing the writing measurements as well as outcomes on language content between CLIL and EMI (Graham and Eslami 2020); the perspectives of pre-school teacher on EMI (Goh et al. 2020). Therefore, this study does not examine the EMI-related problems but generalises the extent to which EMI literature has arisen from 1974 to 2022 by using a method of bibliometric review.

The review answers four main research questions (RQ) respectively:

**RQ1** What has changed in the literature on EMI regarding the growth trajectory of publication and geographical allocation of publications for 1974 - 2022?

**RQ2** What co-authorship patterns have evolved in EMI literature for 1974 - 2022?

**RQ3** What are the most influential papers in the EMI literature for 1974 - 2022?

**RQ4** What research topics have been most frequently studied in EMI research between 1974 and 2022?

## Methodology

### *Identification of sources*

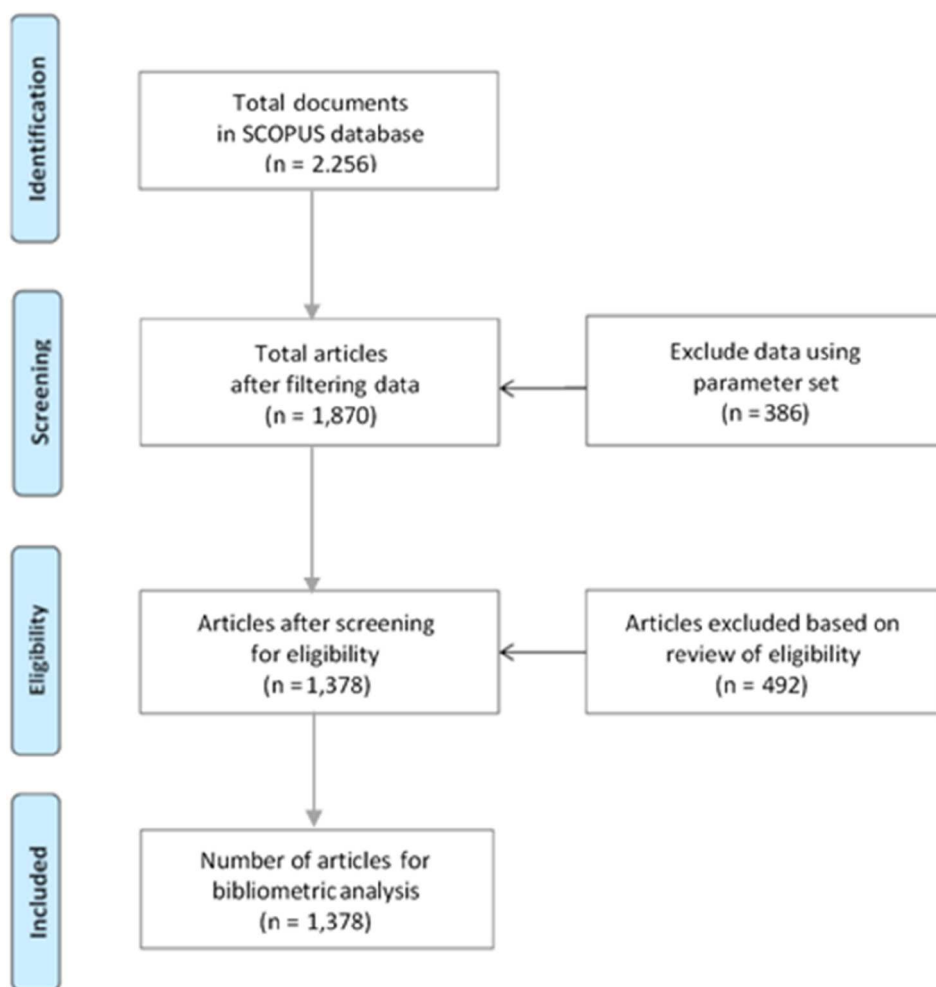
This bibliometric review fully exploited the database from Scopus. Although science mapping methods can be made use of databanks from other sources such as Web of Science or Google Scholar, Scopus seems to be more suitable than its counterpart because of the capacity for storing significant relevance of extensive documents in the education field (Hallinger 2020; Zupic and Čater 2015). Hence, it was considered the most satisfactory repository from which to extract documents for this review of the research. In order to maximise the range of potential sources, the study searched for articles, books, book chapters and conference papers included in Scopus across the decades between 1974 and 2022. Based on the founded results, 1974 was the first year Scopus recorded the first paper on EMI. Subsequently, the review used the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) (Moher et al. 2009). The study uses the following keyword strings in a Scopus keyword search.

TITLE-ABS-KEY ('English as a Medium of Instruction' OR 'English-medium Instruction' OR 'English Medium Instruction' OR 'English As Medium Of Instruction' OR 'English Medium Instruction' OR 'English-medium-Instruction' OR (english AND ('medium instruction' OR 'medium-instruction' OR 'medium of instruction'))))

There were 1,870 documents found in this search after removing 386 papers (Figure 1). Following that, filters were employed to eliminate articles that were beyond the review's stated area, such as articles discussing other languages as a medium of instruction, e.g. France (Reeder, Buntain, and Takakuwa 1999) or the perspective of using L1 to convey or communicate during subject learning (Desai 2013). Therefore, the final database was 1378 documents.

### *Data extraction and analysis*

We downloaded bibliographic data on 1378 documents and saved it in an Excel file, which contained details such as author names, affiliations, article titles, sources, references, keywords, abstracts, and citation data. The documents mainly consisted of 1089 articles (79%), 177 book chapters (12.85%), 45 reviews (3.27%), 34 conference papers (2.48%) and 33 books (2.4%). To prepare the data for analysis in VOSViewer, we created a thesaurus file to filter and disambiguate similar terms or keywords, such as variations in author names or singular and plural forms of keywords. This thesaurus file helps improve the accuracy of bibliometric reviews.



**Figure 1.** PRISMA flowchart showing the stages involved in identifying and filtering sources from the Scopus database (Adapted from Moher et al. 2009).

Science mapping involves using descriptive statistics, co-citation analyses, and co-occurrence analysis to gain a comprehensive understanding of the development, composition, and intellectual structure of EMI knowledge base (Zupic and Čater 2015). In this review, descriptive statistics and graphs illustrated the size, growth trajectory, and geographic distribution of documents in the database. Co-citation analyses were utilised to identify trends related to the composition and structure of the knowledge base.

Co-citation analysis involves generating a matrix based on the references cited in the documents within the review database. Variants of co-citation analysis include journal co-citation, author co-citation, and document co-citation analysis, each using matrices of co-citation frequencies for analysis. This method, which includes documents beyond the review database and Scopus, offers a more comprehensive view of scholarly impact compared to direct citation analysis alone (White and McCain 1998; Zupic and Čater 2015). Co-citation analysis provides both co-citation counts and measures of similarity among documents, authors, or journals (White and McCain 1998; Zupic and Čater 2015). In particular, co-citation analysis can visually represent the relationships among authors in a field based on co-citation patterns. For this review, VOSviewer was used to create visual maps of relationships among features of documents in the EMI knowledge base. Co-citation maps help analyze various relational aspects of the knowledge base.

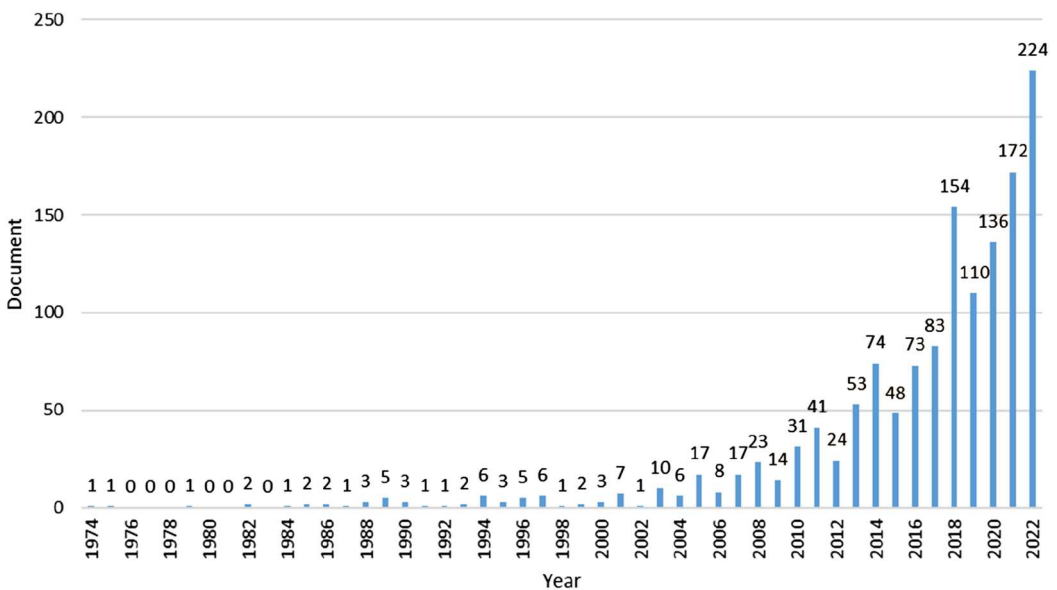
To address the final research question, keyword co-occurrence analysis was used to elucidate the topical composition of the EMI knowledge base (van Eck and Waltman 2014; Zupic and Čater 2015). Co-word analysis measures the frequency with which two keywords appear together in titles, abstracts, or keyword lists of documents in the review database (van Eck and Waltman 2014). This analysis identifies frequently co-occurring keywords and maps their relationships in a network (van Eck and Waltman 2014; Zupic and Čater 2015).

## Results

In this section, the study answers four outlined questions. There would be an ongoing investigation to work out this knowledge base's scope, evolution, and geographic dispersion, from which to identify prominent authors and materials before revealing the literature's conceptual structure.

### *Growth trajectory and geographical dissemination of EMI literature*

The data from Scopus-indexed publications comprising 1387 EMI-related documents from 1974 to 2022 provides some modest indications of EMI literature performance. Until 2000, the EMI literature remained essentially unchanged. However, with the arrival of the twenty-first century and the global spread of English as a favoured mode of communication, there was a notable increase in EMI literature (see Figure 2). Notably, the number of articles concentrating on EMI did not approach double digits between 1974 and 2001, with only six to seven publications in 1994, 1997, and 2001 (see Figure 2). The number of publications increased to double digits between 2003 and 2010, although the growth rate was relatively slow compared to the period between 2011 and 2022, which experienced more substantial growth. Overall, the growth curve of EMI publications over nearly 50 years revealed a fluctuating trend, similar to zigzag instability. This pattern likely reflects changes in research interest, which can rise and fall based on academic trends, the availability of funding, or shifts in policy and global events. Economic downturns or shifts in educational priorities could have led to temporary decreases in publication output. Conversely, surges in interest due to new policies or global academic trends might have caused spikes in research activity, leading to the observed instability.



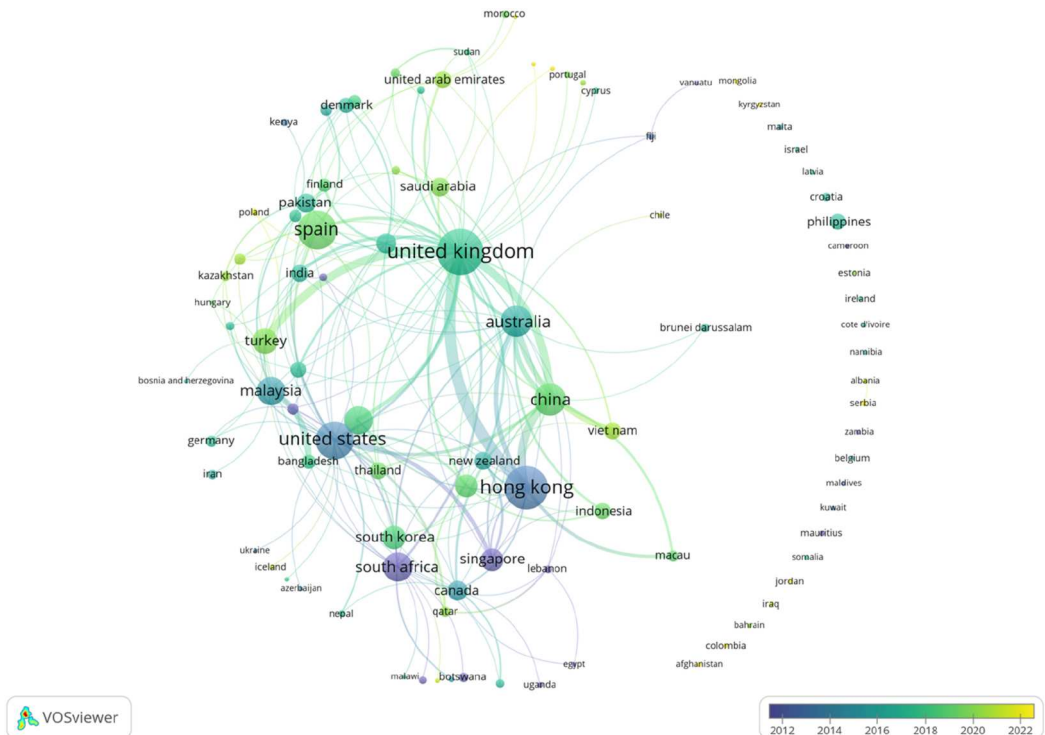
**Figure 2.** Growth trajectory of publications on EMI, 1974–2022 ( $n = 1378$ ).

**Figure 3** depicts the breadth of study on English as a Medium of Instruction (EMI) literature from various nations. The most notable contributors to the progress of EMI literature are the United Kingdom, Hong Kong, Spain, and the United States. The United Kingdom tops the group with the most publications, with 162 papers. Hong Kong comes in second with 145 publications, Spain in third with 115 publications, and the United States in fourth with 110 articles. South Africa is the only productive African nation represented in this research, and it has increased its presence in EMI literature with 66 articles. It is worth noting, however, that all of South Africa's publications happened in 2012. Oceania's two countries, Australia and New Zealand, have also been active in this subject, with 73 and 26 papers, respectively. Asian countries participate in EMI literature at a higher rate than other continents. With 79 publications, China leads the Asian pack, followed by Malaysia (63 publications), Japan (61 publications), Singapore (39 publications), and South Korea (44 publications).

Interestingly, while Asian nations do not have the most significant overall number of publications, they have shown a substantial increase in recent years, notably between 2020 and 2022. Saudi Arabia has 28 publications, the United Arab Emirates has 24 publications, Vietnam has 23 publications, and Kazakhstan has eight publications. This result is consistent with prior studies on international student migration in Asia (Pham et al. 2021). Regarding publishing volume, the United Kingdom and Spain dominate European countries, ranking first and third internationally. With 110 publications, the United States leads the Americas, while Canada is not far behind with 30 publications.

### *The authorship network structure of the EMI literature*

The bibliometric map of co-authorship from the VOSviewer using author names showed that EMI authors share a moderately grown context. Also, most of the author groups with the most prominent co-authorship are listed in the list of 10 authors with the most published articles (see [Table 1](#)).



**Figure 3.** Bibliometric map of co-authorship from VOSviewer using country, 1974–2022 ( $n = 1378$ ).



**Table 1.** Top highly-cited authors published in EMI literature, 1974–2022 (Ranked by number of publications and citations index).

Ranked by the number of documents				Ranked by the number of citations			
ID	Author	Affiliations	Number of documents	ID	Author	Affiliations	Total citations
1	Macaro e.	The University of Oxford, UK	18	1	Macaro e.	The University of Oxford, UK	494
2	Lasagabaster d.	University of The Basque Country UPV/EHU, Spain	16	2	Hu g.	Hong Kong Polytechnic University, Hong Kong	469
3	Evans s.	Hong Kong Polytechnic University, Hong Kong	15	3	Lasagabaster d.	University of The Basque Country UPV/EHU, Spain	397
4	Hu g.	Hong Kong Polytechnic University, Hong Kong	13	4	Doiz a.	University of The Basque Country UPV/EHU, Spain	324
5	Kim j.	Ulsan National Institute of Science and Technology, Korea	13	5	Curle s.	The University of Oxford, United Kingdom	322
6	Doiz a.	University of The Basque Country UPV/EHU, Spain	12	6	Dearden j.	The University of Oxford, UK	304
7	Rose h.	The University of Oxford, United Kingdom	12	7	Kuteeva m.	Stockholm University, Sweden	282
8	Curle s.	The University of Oxford, United Kingdom	9	8	Lei j.	Guangdong University of Foreign Studies, China	277
9	Sahan k.	The University of Oxford, United Kingdom	8	9	Airey j.	Stockholm University, Sweden	262
10	Hamid mo.	The University of Queensland, Australia	7	10	Pun j.	City University of Hong Kong, Hong Kong	257

For example, the author Macaro E with the highest number of articles is, 18, followed by the author Lasagabaster D with 16 publications and ranked third is the author Evans S with 15 documents.

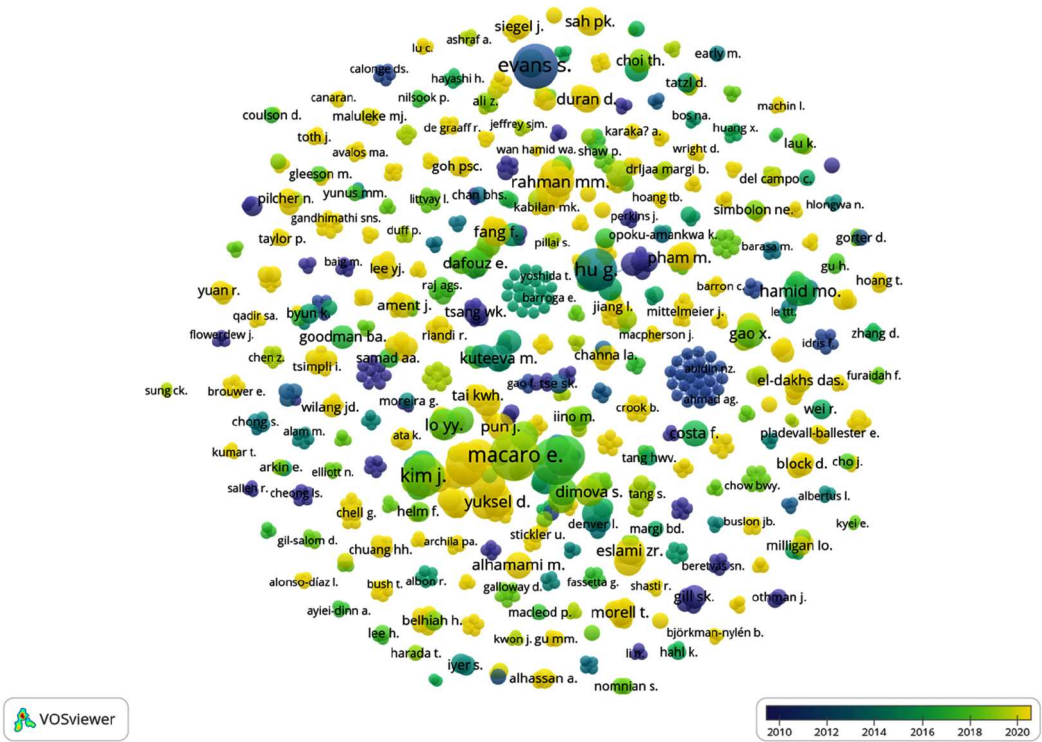
Notably, this ranking also recalls the ranking mentioned above of the three most productive countries in this field (Evans S comes from Hong Kong Polytechnic University, Macaro E is a representative of Oxford University, and Lasagabaster D belongs to a Spain university, University of The Basque UPV/EHU). However, only the group of authors Macaro E and Lagabaster most amply demonstrate their co-authorship (see Figure 5). It also reflects directly the situation of other author groups. Typically, in the case of Evan S, despite having the highest number of publications, the author publishes independently and appears as the first author and only includes himself as co-author of four documents with a colleague author (Evans 2011, 2017; Evans and Morrison 2018; Morrison and Evans 2018). Contrary to these large but scattered co-author clusters, there are two small but dense clusters of up to 20–24 authors in one article (Ismail et al. 2011; Rodis et al. 2014) (see Figure 4).

### Top prominent journals and authors in EMI literature

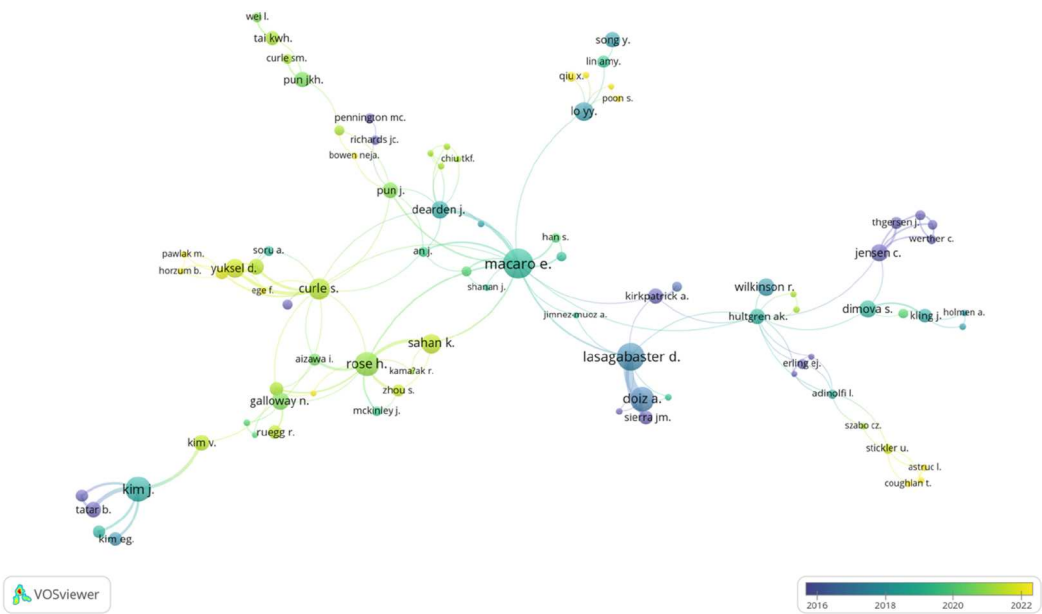
The review utilises VOSviewer software to pinpoint the most prominent and influential journals across the 1089 journal articles in the field of EMI, categorised by the number of publications and citation indices (see Table 2). Leading in both categories is the *International Journal of Bilingual Education and Bilingualism*, with 55 published documents and a total of 1,070 citations, indicating its outstanding influence in EMI research. Following closely is the *Journal of Multilingual and Multicultural Development*, with 39 publications and 802 citations, demonstrating that the research published in this journal is also highly valued in the academic community.

Additionally, *Current Issues in Language Planning and System* may have fewer published documents but still hold significant positions with a large number of citations. *Higher Education* and *Language Teaching* are also highly cited journals, highlighting the substantial contributions of





**Figure 4.** Bibliometric map of co-authorship from VOSviewer using author names, 1974–2022 ( $N = 1000$  authors; threshold 1 articles).



**Figure 5.** Co-author collaboration network of Macaro E authors group, 1974–2022.

**Table 2.** Top journals publishing EMI literature, 1974 - 2022 (Ranked by number of publications and citations index).

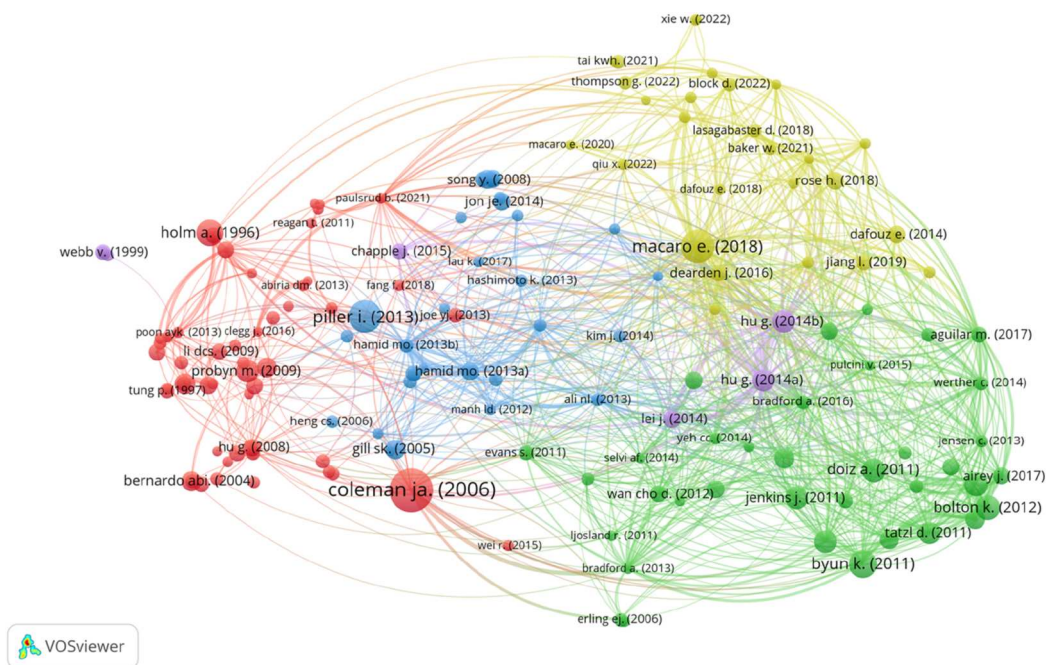
Ranked by the number of documents				Ranked by the number of citations			
ID	Sources	Scope	Number of documents	ID	Sources	Scope	Total citations
1	International journal of bilingual education and bilingualism	Education Linguistics and Language	55	1	International journal of bilingual education and bilingualism	Education Linguistics and Language	1070
2	Journal of multilingual and multicultural development	Cultural Studies Education Linguistics and Language	39	2	Journal of multilingual and multicultural development	Cultural Studies Education Linguistics and Language	802
3	Current issues in language planning	Education Linguistics and Language	33	3	Higher education	Education Law	690
4	System	Education Linguistics and Language	32	4	Language teaching	Linguistics and Language	661
5	Asian efl journal	Education Linguistics and Language	27	5	Current issues in language planning	Education Linguistics and Language	533
6	Journal of english for academic purposes	Education Linguistics and Language	25	6	World englishes	Linguistics and Language Anthropology Sociology and Political Science	504
7	Language and education	Education Linguistics and Language	22	7	Language policy	Linguistics and Language	390
8	World englishes	Linguistics and Language Anthropology Sociology and Political Science	22	8	Language and education	Education Linguistics and Language	335
9	Asian englishes	Linguistics and Language	18	9	Journal of research in science teaching	Education	301
10	Journal of asia tefl	Education Linguistics and Language	18	10	Journal of english for academic purposes	Education Linguistics and Language	282

EMI research to the fields of education and language. Notably, although some journals like *World Englishes* and the *Journal of English for Academic Purposes* have fewer published documents, they still achieve a considerable number of citations, reflecting the quality and impact of the research published in these journals.

Overall, this ranking not only reflects the number of publications but also emphasises the importance and influence of these journals in EMI research, while also showcasing the interdisciplinary nature of this field, encompassing areas such as education, linguistics, and cultural studies.

Next, the research groups 152 documents into five clusters to illustrate the most prominent documents in EMI literature. Therefore, by specialising these documents concerning their belonging colours, quickly spotlight them in terms of their prominence (see Figure 6).

Beginning with the *red cluster*, the writers mainly concentrate on various features of EMI programmes in K-12 educational settings. These issues include, among others, student performance, linguistic practice, multilingual policy, and language choice. The bulk of the papers in this coloured cluster were published between the 2000s and the 2010s, a period in which EMI witnessed tremendous growth as compared to prior to the 2000s, including Coleman (2006) (378 co-citations), Holm and Dodd (1996) (142), Li (1999) (87) and Bernardo (2004) (80). These publications were published during the early stages of internationalisation when English instruction began to acquire significance in several general education institutions. Coleman (2006) (378 co-citations) and Tsuneyoshi (2005) (80) stand out as the only notable writings discussing EMI in the context of higher education during this period.



**Figure 6.** EMI document relationship based on coupling analysis, 1974–2022 ( $N = 152$  documents, threshold 20 citations).

Following that, *the green cluster* mirrors the views of students who began investigating various aspects of EMI programmes in the university context. Key authors in this school include Byun et al. (2011) (152 co-citations), Bolton and Kuteeva (2012) (123), Doiz, Lasagabaster, and Sierra (2011) (112). These characteristics include the student experience, instructors' perspectives, the quality of EMI programmes, and the impact of globalisation and internationalisation on EMI. Notably, all the articles in this green category were published after the 2010s.

Within *the blue cluster*, EMI academics have gone deeper into issues addressing the impact of English as a Medium of Instruction (EMI) and its efficacy in K-12 and higher education settings. They look into EMI administration, pedagogy, learning results, and the spread of EMI compared to teaching in students' home languages. Key authors in this cluster include (Piller and Cho 2013) (217 co-citations), Gill (2005) (77), Song and Fox (2008) (69).

For *the yellow cluster*, publications seek to better understand EMI within the context of higher education and its link to internationalisation. The scholars carefully investigate well-known components such as stakeholders' viewpoints, understanding, and challenges encountered in multilingual universities; or regarding EMI as an initiative to promote higher education internationalisation. Key authors in this school include Dearden and Macaro (2016) (277 co-citations), Dafouz, Camacho, and Urquia (2014) (66), Rose and McKinley (2018) (64).

Moving on to *the purple cluster*, the authors emphasise the significance of language policy, including language curriculum development and teaching English policy. Key authors in this cluster include Hu and Lei (2014) (107 co-citations), Hu, Li, and Lei (2014) (98), Lei and Hu (2014) (67).

### **The most frequently studied topics in EMI literature**

Regarding the fourth question, this review uses co-occurrence analysis to present EMI-related keyword co-occurrence from 1974 to 2022 (see Figure 7). Indeed, this temporal overlay effectively delivers the most frequently studied keywords in EMI literature, including the medium of instruction,



keywords).

On the balance of probability, the case of Evans S constitutes the most convincing proof. According

Figure 7 also signals that EMI-related research direction moves into a specific term ‘English as



## Discussion, implications and conclusion

The bibliometric analysis of English as a Medium of Instruction (EMI) research from 1974 to 2022, based on an extensive dataset of 1,387 Scopus-indexed articles, provides a comprehensive view of the field's development. This analysis uncovers significant patterns in the growth trajectory of EMI literature, the geographical distribution of research, the networks of authors, and the key themes and articles that have shaped the discourse. These insights not only reflect the evolution of EMI research over nearly fifty years but also offer valuable implications for researchers, policymakers, and educators seeking to understand and advance the field.

The Scopus-indexed papers suggest that researchers still need to investigate the features of EMI literature thoroughly. The bibliometric data indicates a steady increase in EMI research publications, particularly accelerating from 2011 onwards. This upward trend highlights the growing interest and investment in EMI as a field of study. However, despite this growth, the research network remains notably fragmented. The predominant mode of collaboration is domestic rather than international, which suggests that while there is an increase in research output, the exchange of ideas and collaboration across borders remains limited. This fragmentation poses a challenge for the field, as international cooperation is essential for advancing a global understanding of EMI practices and policies. The lack of robust international networks may impede the development of a cohesive global perspective on EMI and limit the cross-pollination of ideas that could drive further innovation and improvement in the field.

The dominance of English-speaking countries, such as the United Kingdom and the United States, in EMI research underscores a significant imbalance in the global research landscape. These nations have historically led the development of EMI, which may inadvertently reinforce Western educational ideologies and practices. This situation reflects a broader trend of educational neocolonialism, where developing countries, often dependent on the expertise and resources of wealthier nations, find their educational policies and practices influenced by external powers. As a result, there is a risk that these countries may struggle to assert their own educational priorities and maintain autonomy in shaping their higher education systems. This dynamic highlights the need for greater inclusivity and diversity in EMI research to ensure that a broader range of perspectives and experiences are represented.

For many developing countries, EMI programmes represent a strategic opportunity to enhance the internationalisation of their higher education sectors and improve their global standing. The proliferation of branch campuses and joint EMI programmes established by prestigious institutions from English-speaking countries in various developing regions reflects the increasing disparity in global higher education. This expansion, while providing opportunities for international engagement, also underscores the challenges faced by less affluent nations. Socioeconomic disparities, limited resources, and uneven access to global knowledge markets make it difficult for these countries to achieve the same level of success in attracting international students and expanding their educational influence. The resulting gap highlights the need for targeted support and collaboration to help developing nations build their own educational capacities and reduce the global educational divide.

The predominance of English in EMI literature, even in countries where English is not the primary language, illustrates the significant influence of English-speaking nations in shaping the global EMI agenda. This linguistic dominance can create barriers for non-English-speaking countries, making it challenging for them to fully engage with internationalisation efforts and effectively implement EMI in contexts with different linguistic and cultural traditions. The scarcity of major cross-border co-authorship in EMI research further emphasises the need for enhanced international collaboration. Building stronger global research partnerships and facilitating information exchange among scholars from diverse cultural backgrounds are essential for addressing the complexities of EMI and ensuring that a wide range of perspectives and experiences contribute to the field's development.

Additionally, the identification of significant articles and frequently explored topics within EMI literature can guide researchers in selecting relevant areas for investigation and staying current with the latest developments. The growing focus on issues such as *translanguaging*, the role of EMI in higher education internationalisation, and EMI teacher preparation reflects an increasing interest in multilingual practices and the professional development of educators in EMI settings. By addressing these key areas, researchers can contribute to a more nuanced and effective implementation of EMI, ultimately supporting the advancement of higher education globally.

## Limitations and suggestions for the future study

Given that this review exploits the data from Scopus, it still contains its restriction. Although Scopus has more comprehensive coverage of documents than Web of Science and can still assess all papers in the review database's reference lists in co-citation analysis, it cannot include all documents in a specific field; here is EMI literature. The whole literature on EMI seems far wider than included in this review. Therefore, EMI-related studies in the future likely extract data from a much broader base.

Another limitation emerges from the statistics of Table 2 about top journals publishing EMI literature from 1974 to 2022. This table refers to the ten journals with the most publications on EMI and the 10 with the highest total citations. However, these journals only specialise in language and language-related themes (for instance, Tesol, multilingualism, bilingualism or applied linguistics) and offer minimal scope for EMI ranging in linguistics and language. 'Higher education' is the only highly ranking journal putting EMI beyond only language and linguistics scope. Therefore, future scholars who are interested in the EMI field could broaden the research scope and cover all aspects of the EMI research field.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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