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Exploring Multilingualism in Professional Context: Scientometric Analysis

Abstract. Professional multilingualism has been the subject of multiple interdisciplinary research including sociolinguistics and business communication as well as studies about the neuropsychological aspects of the multilingual brain and multilinguals' language practices in the workplace settings. In recent years, there has been a noteworthy growth in the scholarly interests and contribution in professional multilingualism. In this research study, a bibliometric analytical technique is used to examine the concept of professional multilingualism. The purpose of this study is to analyse the bibliographical data to find the recent scenario of Scopus as well as Web of Science (WoS) core collections pertaining to professional multilingualism literature. Based on the scientometric methodology conducted in October 2022, the authors retrieved publications using the key terms like "Professional multilingualism" or "Multilingualism at work" or "Business communication", etc. that in general extracted 3,875 scientific contributions. Therefore, the time frame considered for this study is between 1970 and 2022. The study analyses the growth of author productivity, the publication models, the distribution of the thematic category, the distribution of the author's keywords, the country of publications, as well as the most frequently cited articles related to professional multilingualism publications and other aspects. In addition, the result identified the significant areas related to professional multilingualism focuses on Corporate Language, Multilingualism, Language Policy, Language Management, Intercultural Communication. Future research could extend a similar study in other related areas in professional language teaching-learning to explore the publication trends globally.

Keywords: multilingualism, scientometric analysis, professional multilingualism, business communication, professional context, corporate language policy, bibliometric analysis.

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Introduction. Nowadays there is a sustainable demand for investigating multilingualism in professional contexts and business communication. The obvious reason for this is that good communication skills are very important for employment and running a business in general. In particular, professional multilingualism has been the subject of numerous interdisciplinary studies, including sociolinguistics [1, 2, 3] and business communication [4, 5], as well as research on the neuropsychological aspects of the multilingual brain [6, 7] and the language practices of multilingual people in the workplace [8, 9] and others. In recent years, there has been a marked increase in research interests and contributions to professional multilingualism [1, 10, 11].

Moreover, in accordance with the European Commission recommendations [12], European Quality Assurance in Vocational Education and Training [13] professional multilingualism is currently regarded in the list of key economic competences for lifelong learning. Based on these strategical programs and other related documents multilingual competence is considered essential for understanding economics since many economic terms come from foreign languages and defined as considered as “the ability to use different languages appropriately and effectively for communication” [14, p. 90]

In order to identify the global trend of professional multilingualism, it is important to analyse the existing research work being done in the field of multilingualism in professional context, as well as in teaching languages for occupational and professional purposes. In addition, such a comprehensive bibliometric analysis of the research publications would be useful for understanding the prospects for research in this area. The present research analyses the research publications on Scopus and Web of Science databases related to professional multilingualism based on Scientometric approach. This study analyses the growth of author productivity, the publication models, the distribution of the thematic category, the distribution of the author’s keywords, the country of publications, as well as the most frequently cited articles related to professional multilingualism publications and other aspects.

Therefore, the main research objectives of the study are 1) to find out the global research trend in professional multilingualism literature; 2) to obtain the most productive authors related to the publications on professional multilingualism;

3) to determine the most productive sources of publication; 4) to examine the leading countries and their contributions related to professional multilingualism literature.

Problem statement. This paper highlights the issues related to the concept of professional multilingualism on the workplace based on that need to be considered in developing and implementing corporate language policies. As noted by researchers [15, 16], the Scientometric overview provides scholars and practitioners with reliable information to identify the knowledge base, evolutionary process, and new trends in a particular area using visualized maps, as well as gives the basis and impetus for future research in a particular field. Bibliometric methods use bibliographic data from online databases [17], which can provide a systematic report that complements existing descriptive reviews and contributes to metadisciplinary knowledge in a certain area, identifying the main areas of research, main research and development trends over the years [18].

Regarding the phenomenon of professional multilingualism, it was investigated that particularly organisations with offices in more than one country are more likely to face problems in managing access to foreign-language information [19]. In general, research on these issues and potential solutions only emerged in the mid-1980s, but since then the pace has accelerated rapidly and the topic is now seen as an important aspect of international business management. Ultimately, managing corporate language diversity or multilingualism at work is a classic ‘wicked problem’, and there are very few ‘good practices’ that are universally accepted. [19: 58].

Moreover, some scholars [10, 11, 20] stress the need to reconsider the aims of education, and to emphasise a “multilingual turn” in the context of contemporary business schools, moving away from the framework previously articulated in terms of individual national languages and cultures. Their research shows how the cultural and linguistic diversity of the student population contributes to a “multilingual approach” in the educational context, reinforcing the reality of interpersonal exchanges that are increasingly taking place in different languages. Preparing students to recognise, understand and acquire competences to negotiate at multiple levels of linguistic and cultural diversity should be a major aim of management and professional communication education. Researchers in the

field of international business education and business communication emphasise the need for educational and pedagogical strategies to harness the potential of professional multilingualism, which improves learning outcomes and expands the cognitive range of individuals [20].

The importance of language management in multinational companies is becoming increasingly relevant today. Multinational companies are increasingly aware of the importance of global coordination as a source of competitive advantage, and language remains a major obstacle to international harmonisation. Current research examines the solutions open to multinational companies in the area of language management and discusses the trend towards globalisation, describing aspects of the language barrier and illustrating its consequences [21].

Thus, bibliometric analysis will identify the most frequent topics (i.e. authors, keywords) as well as the most productive authors, sources, countries and organisations [22, 18]. Moreover, the scientometric analysis will provide a systematic report that complements existing descriptive surveys regarding professional multilingualism.

Methodology. In this study the development of research in the field of professional multilingualism was assessed by means of a scientometric analysis. Therefore, based on scientometric analysis conducted in October, 2022 we retrieved publications using the key terms like (“professional multilingualism” OR “multilingualism at work” “language diversity in the workplace” OR “language for professional purposes” OR “language for business purposes” OR “business communication” OR “corporate language policy” OR “corporate language” OR “business discourse” OR “workplace discourse” OR “multilingualism in the workplace” OR “multilingual professionals” OR “multilingualism and professional development”) that in general extracted 4,329 scientific contributions in all fields of Scopus (2,763) and Web of Science (1,112) scientific contributions were found respectively. Therefore, the time frame considered for this study is

between 1970 and 2022. In general, 13 common terms and their variants were used. It was noted that one of these terms was present in the title of the retrieved document or in related keywords (provided by authors or automatically indexed).

After the duplication was removed, the number of main contributions was reduced to 3,875. Inclusion criteria were used to select the results. Therefore, for the purposes of the analysis we restrict the dataset to the period 1970-2022.

The scientometric analysis presented in this study was carried out in the following phases: 1) study design; 2) data collection; 3) initial data analysis; 4) descriptive bibliometric analysis; 5) network analysis; 6) conclusions and directions for future research.

Two tools were used to analyse the results of search queries from Scopus and WoS.

Bibliometrix is an R package for comprehensive quantitative research in the field of Scientometric and bibliometrics. It allows importing bibliographic data from several sources, including Scopus and WoS. In addition, it evaluates citations as well as other types of measures such as linking, scientific collaboration and co-word analysis [23].

VOSviewer is a software tool to build and visualise bibliometric networks. These networks can include journals, researchers or individual publications and can be built on the basis of citations, bibliographic relationships, joint citations or co-authorship relationships [24].

Results and Discussions. The total loaded documents of “Professional multilingualism” for analysis were observed as in Figure 1, revealing an exponential growth in the literature on Professional Multilingualism from both databases includes Scopus (2,763) and WoS (1,112). Some duplicates were found in the publications found, which were subsequently cleaned for further analysis. The figure below shows the number of documents uploaded to remove duplicates from both databases, namely the number of duplicates removed, and the final number of documents (3,875) considered for further analysis. A total of 456 documents were identified as duplicates.

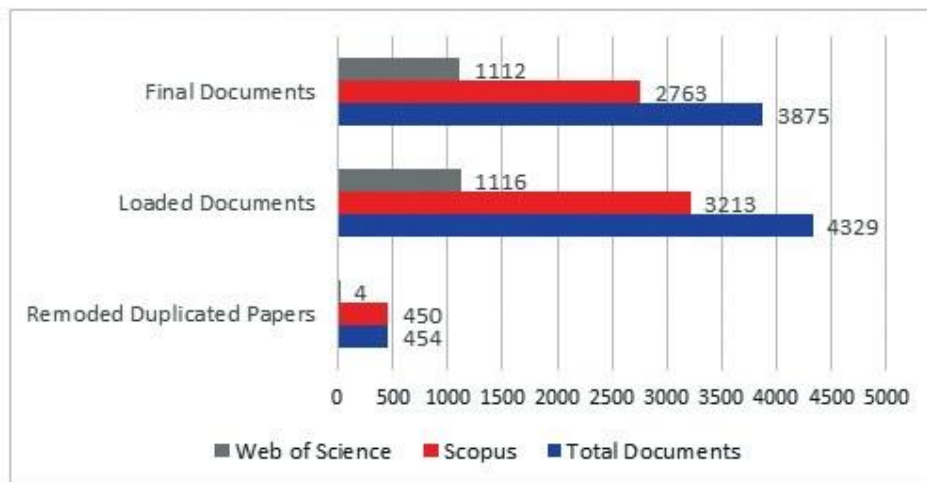


Figure 1. Records after Duplications Removed

The scientometric analysis also enables to represent the profile of Professional Multilingualism research trends, the use of keywords, and authors' appearance in a table form from the time span 1970 to 2022. Thus, the highest contributed documents in Professional

Multilingualism research are in journal articles (2,593) followed by 668 conference papers. Multi-authored documents contribution is highest with 5,539 followed by single-authored documents 1,395 (see Table 1).

Table 1

Summary of Publications on Professional Multilingualism from Scopus and WoS

DESCRIPTION	RESULT	DOCUMENT CONTENTS	RESULT
Timespan coverage	1970-2022	Keywords Plus (ID)	1,228
Sources (Journals, Books, etc)	856	Author's Keywords (DE)	8,944
Documents	3,875	AUTHORS	RESULT
Average citations per documents	11.96	Authors	6,934
DOCUMENT TYPES	RESULT	Author Appearances	11,575
Article	2,518	Authors of single-authored documents	1,395
Conference Paper	698	Authors of multi-authored documents	5,539
Review	193	Documents by type	
AUTHORS COLLABORATION	RESULT		
Single-authored documents	1,640		
Documents per Author	0.705		
Authors per Document	1.42		
Co-Authors per Documents	2.37		
Collaboration Index	1.71		

Figure 2 shows the number of Professional Multilingualism publications over the period of time, the time interval started in 1970 (9 publications) and ends with the 137 publications already available online in 2022. It can be

observed that from 2005 to the year 2022 there is an increasing growth in publications. Moreover, in 2019, there was a significant increase in publications noted as highest with 178 publications.

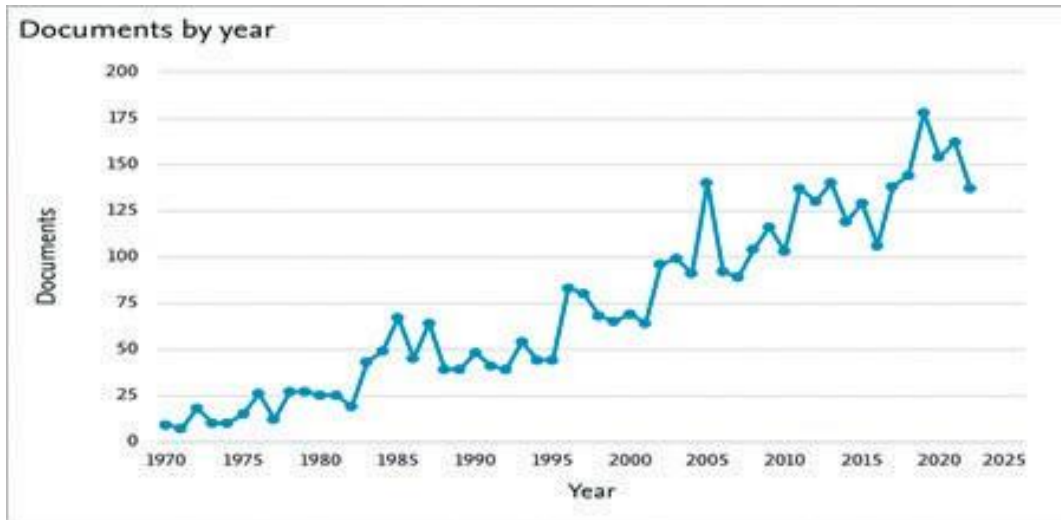


Figure 2. Year wise Publication Growth

With a help of scientometric analysis it was also possible to identify the subject-wise publication coverage of professional multilingualism, which showed that the subject “Social Sciences” covers the highest number of publications (2443 publications) followed by the subject “Art and Humanities” (1637 publications),

“Business, Management and Accounting” (1232 publications), “Economics, Econometrics and Finance” (604 publications), “Psychology” (219 publications), “Decision Sciences” (59 publications), and multidisciplinary subjects with the least publications (11 publications) (See Figure 3).

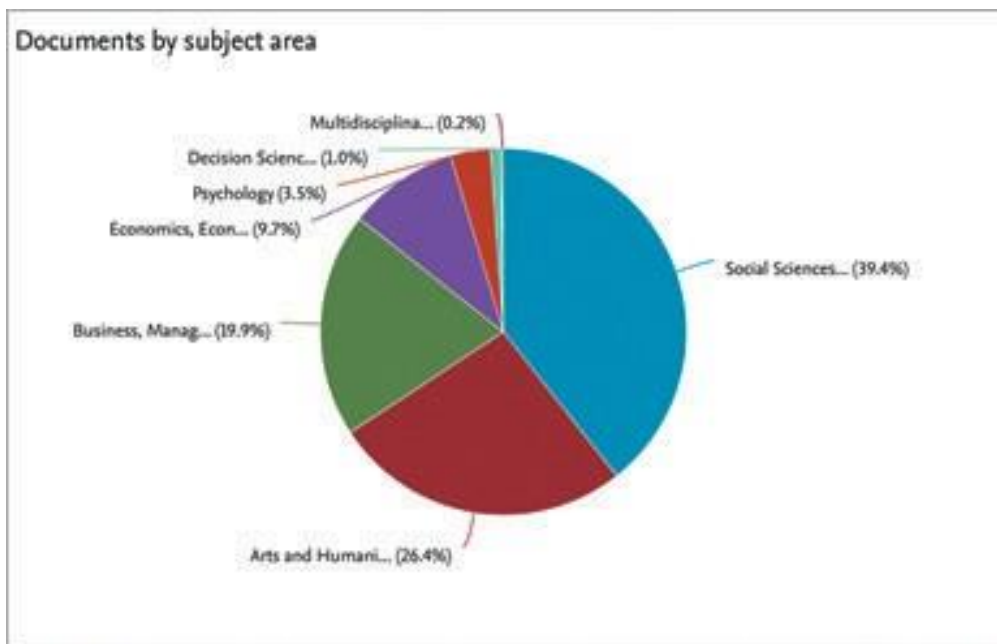


Figure 3. Productive Subject from Professional Multilingualism Publication

The use of several journals allows for a better understanding of the importance and scientific depth of the topic under investigation (Secinaro et al., 2020). Figure 4 shows the top 15 relevant sources in which publications on professional multilingualism were taken along with the total number of publications over the years. The figure shows that Business

Communication Quarterly (554) has the highest publication on Professional Multilingualism followed by Journal of Business Communication (483), Business and Professional Communication Quarterly (81), Journal of Business and Technical Communication (43), and International Journal of Business Communication (32), and others.

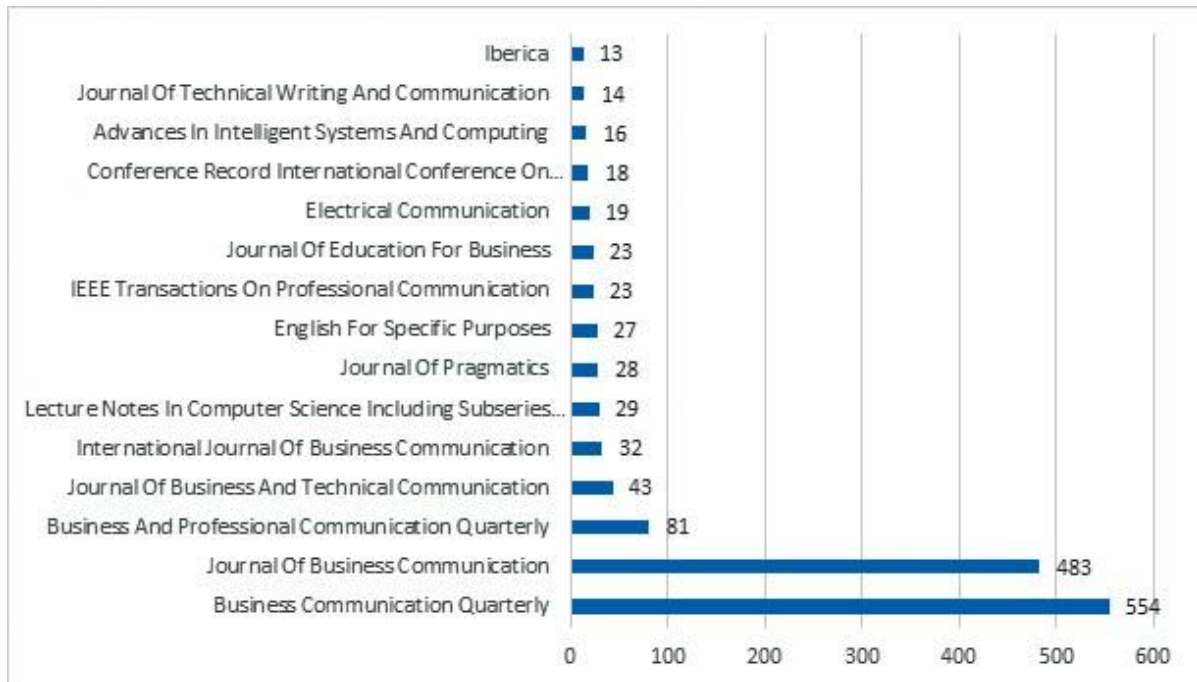


Figure 4. Productive Journals which Published more articles on professional multilingualism

Figure 5 below represents the distribution of articles published over a period of time, presented the journals dealing with the topic of professional multilingualism and its related themes. Significant growth in the number of publications on professional multilingualism identified between the period 2010 and 2022. The major professional multilingualism-related contributed journals are like the Business Communication Quarterly, followed by Journal of Business Communication,

Business and Professional Communication Quarterly, Journal of Business and Technical Communication, International Journal of Business Communication, Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial, Intelligence and Lecture Notes in Bioinformatics, Journal of Pragmatics, English for Specific Purposes and figure listed remaining journals are published least score compared to the above-mentioned journals.

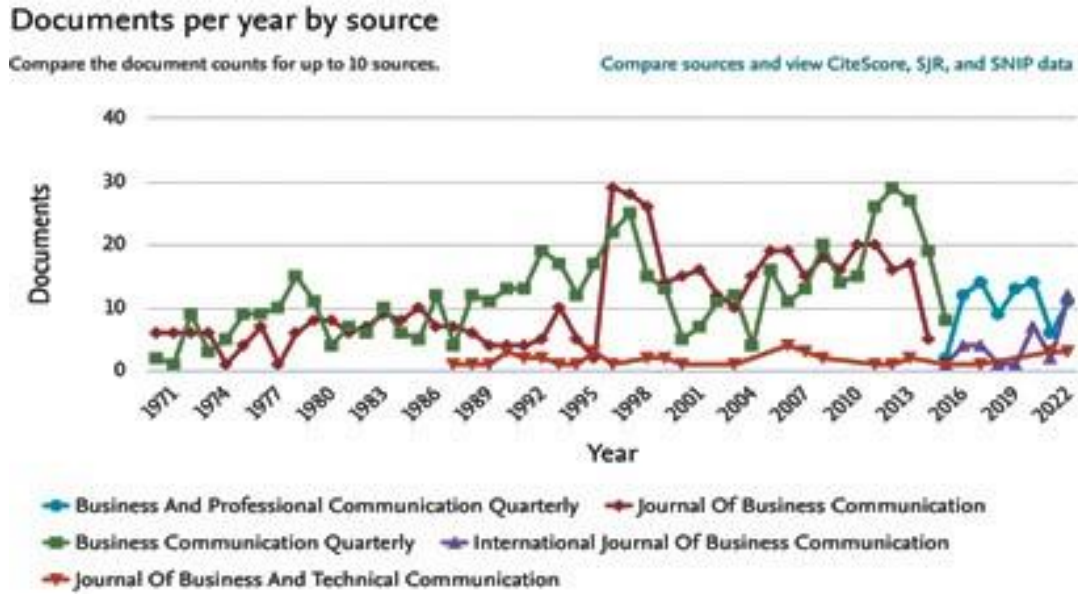


Figure 5. Evolution of Professional Multilingualism related Journals

In addition, within this analysis the most productive authors with h-index who conduct their research related to professional multilingualism were identified. For example, the first top 15 authors who produced a significant number of publications on the given subject refer to Holms J. (28 papers) followed by Marra M., Pikhart M., Whalen D.J., Louhiala-Salminen L., Bargiela-Chiappini F., Reinsch N.L., Du-Babcock B., Jameson D.A., Angouri J., Kaznkaanranta

A., Kimbrough S.O., Nickerson C., Hilebrandt H.W. and others. Alongside, from the data about the top institution affiliation working on the considered subject, it was identified that the Iowa State University (the United States) leads the top position followed by Victoria University of Wellington, aalto University School of Business, City University Hong Kong (China), etc. (See Figure 6).

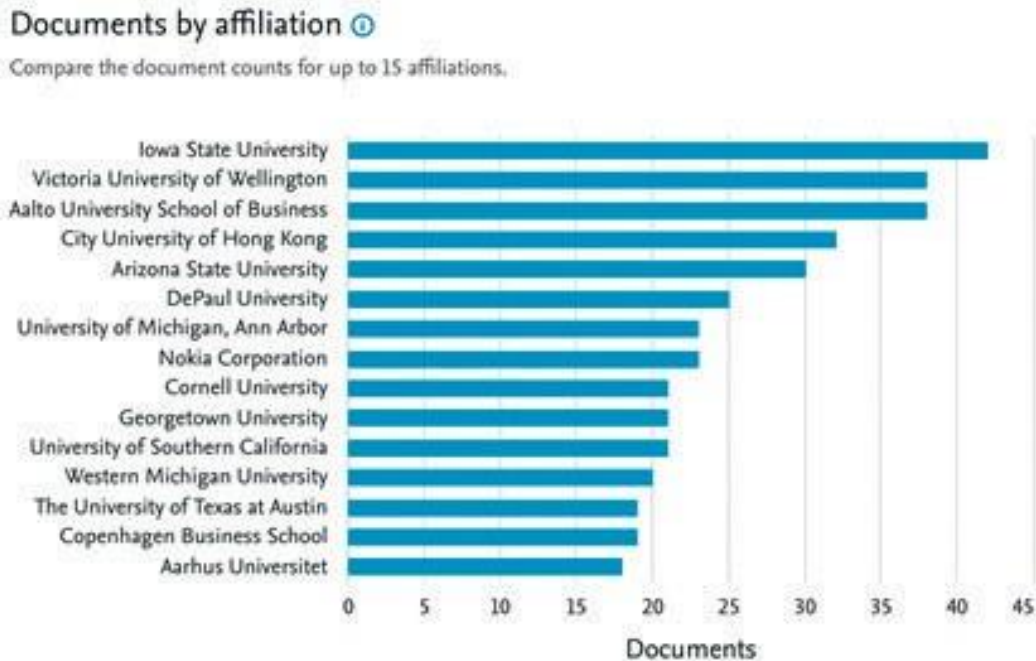


Figure 6. Top Institution Affiliations

With a means of VOSviewer software most productive countries and their coupling with one other and related publications were generated in a pictorial presentation. Figure 7 shows the countries with higher productivity

of professional multilingualism publications globally. Thus, for example, from the figure the top five contributors are seen, i.e., the United States, the United Kingdom, China, Australia, and Spain.

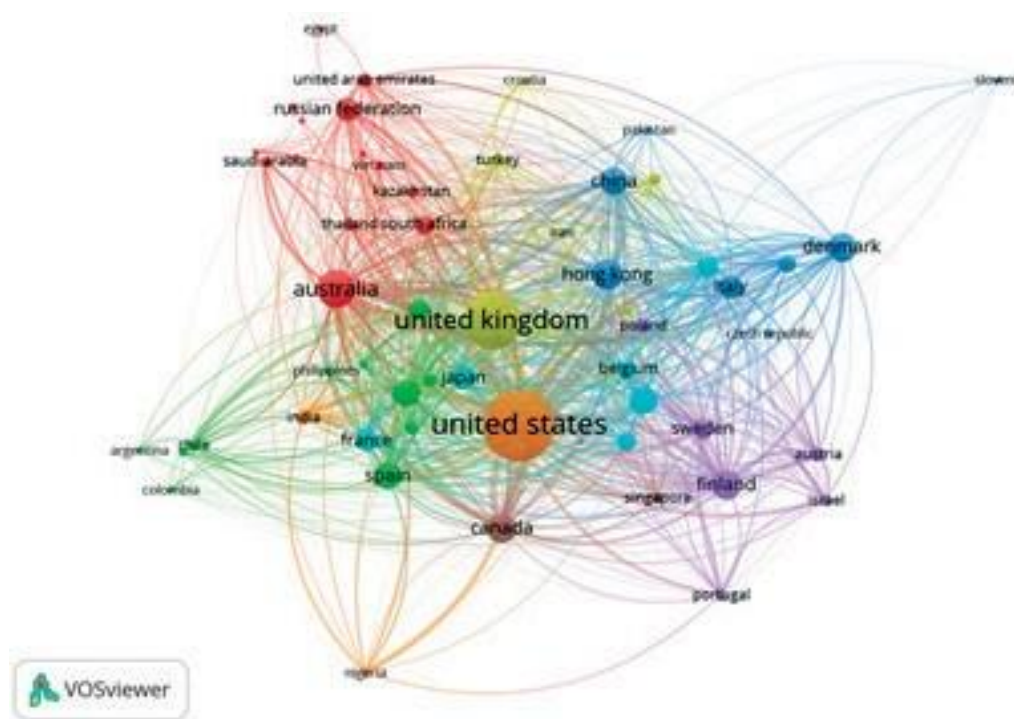


Figure 7. Most productive countries with related publications on Professional Multilingualism

In addition, the analysis of the top countries, keywords, and sources indicated that there were three most productive sources (i.e., Business Communication Quarterly, Journal of Business Communication, Business and Professional Communication Quarterly) and five most frequent keywords (i.e., Corporate Language, Multilingualism, Language Policy, Language Management, Intercultural Communication) having strong relations with seven dominating countries (i.e., United Kingdom, Australia, the United States of America, Canada, China, Spain, Finland). Moreover, from the data, the key words countries like the USA, United Kingdom, China, Australia, New Zealand, Canada, Germany, and Japan were identified as the main collaborative country's networks in the world and consequently were at the forefront of very high production and had a strong collaboration. Similarly listed countries works together in terms of publication and research on professional multilingualism.

Conclusion. This scientometric analysis shows that the global literature on professional multilingualism focuses on Corporate Language, Multilingualism, Language Policy, Language Management, Intercultural Communication. This scientometric study is an in-depth analysis of global research on professional multilingualism, highlighting the interdisciplinary themes of professional multilingualism. Over the last four decades, research on professional multilingualism has made tremendous progress, leading to a better understanding of the process of teaching and learning of professional multilingualism. Collaborative research on professional multilingualism by authors and countries has led to significant progress over the years. Such a study might be useful for researchers, teachers and other stakeholders in the field of professional multilingualism to understand the strengths and potential gaps in research on professional multilingualism and to make plans accordingly.

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Көптілділікті кәсіби контексте зерттеу: ғылыми-метриялық талдау

Аңдатпа. Кәсіби көптілділік әлеуметтік лингвистика мен іскерлік коммуникацияны қоса алғанда, көптеген пәнаралық зерттеулердің, сондай-ақ көптілді мидың нейropsихологиялық аспектілері мен жұмыс орнындағы көптілді адамдардың тілдік тәжірибесін зерттеудің пәні болып табылады. Соңғы жылдары кәсіби көптілділікке ғылыми қызығушылықтар мен үлестердің айтарлықтай артуы байқалады. Бұл зерттеуде кәсіби көптілділік ұғымын зерттеу үшін талдаудың библиометриялық әдісі қолданылады. Бұл зерттеудің мақсаты кәсіби көптілділік бойынша жарияланымдарға қатысты халықаралық Scopus және Web of Science (WoS) дерекқорларындағы соңғы тенденцияларды анықтау үшін библиографиялық деректерді талдау болып табылады. 2022 жылдың қазан айында жүргізілген ғылыми-метрикалық әдістеме негізінде авторлар «Кәсіби көптілділік» немесе «Жұмыстағы көптілділік» немесе «Іскерлік коммуникация» және т.б. негізгі терминдерді пайдалана отырып жарияланымдарды шығарды, бұл барлығы 3 875 ғылыми материалды шығаруға мүмкіндік берді. Осылайша, бұл зерттеуде қарастырылған уақыт шеңбері 1970 және 2022 жылдар аралығын құрайды. Зерттеуде автордың өнімділігінің өсуі, жарияланым үлгілері, тақырып санаттарының таралуы, авторлық кілт сөздердің таралуы, жарияланған елі, сондай-ақ кәсіби көптілділік туралы жарияланымдарға қатысты жиі сілтеме жасалған мақалалар және басқа аспектілер талданады. Сонымен қатар, нәтижесінде кәсіби көптілділікке қатысты маңызды салалар анықталды: корпоративтік тіл, көптілділік, тіл саясаты, тілді басқару, мәдениетаралық коммуникация. Болашақ зерттеулер жаһандық ауқымдағы жарияланым тенденцияларын зерттеу үшін кәсіби тілді оқытудың басқа салаларындағы ұқсас зерттеулерді кеңейтуі мүмкін.

Түйін сөздер: көптілділік, ғылыми-метриялық талдау, кәсіби көптілділік, іскерлік коммуникация, кәсіби контекст, корпоративтік тіл саясаты, библиометриялық талдау.

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Исследование многоязычия в профессиональном контексте: наукометрический анализ

Аннотация. Профессиональное многоязычие является предметом многочисленных междисциплинарных исследований, включая социолингвистику и деловую коммуникацию, а также исследования нейropsихологических аспектов многоязычного мозга и языковой практики многоязычных людей на рабочем месте. В последние годы наблюдается заметный рост научных интересов и вклада в профессиональное многоязычие. В данном исследовании для изучения концепции профессионального многоязычия используется библиометрический метод анализа. Целью данного исследования является анализ библиографических данных для выявления последних трендов в международных базах данных Scopus и Web of Science (WoS), относящихся к публикациям по профессиональному многоязычию. На основе наукометрической методологии, проведенной в октябре 2022 года, авторы извлекли публикации, используя ключевые термины «Профессиональный мультилингвизм», «Мультилингвизм на работе», «Деловая коммуникация» и др., что в целом позволило извлечь 3 875 научных материалов. Таким образом, временные рамки, рассматриваемые в данном исследовании, находятся между 1970 и 2022 годами. В исследовании

анализируются рост продуктивности авторов, модели публикаций, распределение тематической категории, распределение ключевых слов автора, страна публикаций, а также наиболее часто цитируемые статьи, связанные с публикациями по профессиональному многоязычию и другие аспекты. Кроме того, в результате были определены значимые области, связанные с профессиональным многоязычием: корпоративный язык, многоязычие, языковая политика, языковой менеджмент, межкультурная коммуникация. Будущее исследование может расширить аналогичное исследование в других смежных областях профессионального обучения иностранным языкам, чтобы изучить тенденции публикаций в глобальном масштабе.

Ключевые слова: многоязычие, наукометрический анализ, профессиональное многоязычие, деловое общение, профессиональный контекст, корпоративная языковая политика, библиометрический анализ.

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