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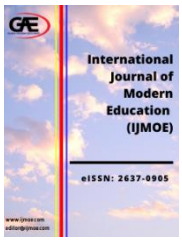

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A BIBLIOMETRIC ANALYSIS OF MULTMEDIA LEARNING AND ENGLISH (2019-2025)

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Abstract:

The advancement in multimedia has changed the education landscape, particularly after the COVID-19 pandemic. The new way of learning, both online and offline, has accelerated multimedia learning materials to enhance the quality of the learning experience. Significant changes have also been made in the teaching of the English language. Numerous literature topics on 'Multimedia learning and English' have also grown flourishingly. However, more extensive bibliographic mapping studies are needed in this field. Raw data were extracted from the Scopus collection database between 2019 and the first quarter of 2025; after which, VOS viewer software was used to analyse the data. Specifically, the study scrutinized the following: research trends in multimedia learning and English, the most influential author, top contributing documents according to countries, the top contributing journal according to document type, and the top contributing journal documents according to subject area. It also includes complex techniques, such as co-occurrence of all keywords, co-occurrence by authors' keywords, and co-citation citation of the authors. Overall, it was found that out of 1013 articles, 400 articles were selected for this study after refinement to only the English language, and exclusion of article reviews was made.

Keywords:

Multimedia And English, Trends, Bibliometric Analysis, VOS Viewer, Co-Occurrence, Co-Citation, All Keywords, Authors Keyword, Citation Of The Authors.

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Introduction

Multimedia is used extensively in today's education. Learning technologies are significantly changing the nature of learning. The advancement in multimedia has given rise to a significant change in the teaching of English (Procel et al., 2024). The benefits of integrating technology into language teaching have not only provided unprecedented access to authentic resources but also enhanced interaction and linguistic immersion in terms of personalization in learning (Wu, 2021).

There are various definitions of multimedia. The word "Multi" as "many or much," and "media", is the plural form of "medium", which also refers to a "system of communication." (Noetel et.al, 2021). The notion of 'multimedia' also emerged from the blending of many media types (Onyejelem & Andover, 2024). Contextually, Mayer (2011) described the word multimedia as a learning method that combines words and visuals (such as videos or animations) and words (e.g., verbal or written text). Zhang (2024), also referred to multimedia as an application of text, graphics, video, sound as well as animations.

The concept of "Multimedia learning and English" has been coined and has been widely used in English language education since the 1960s and early 1970s. An early example of Multimedia technology in English was introduced by Nelson and Van Dam through a hypertext editor at Brown University (Thompson, 1977; Fulantelli,2023). This has led to widespread multimedia usage in English with labs with audio recordings, educational television, broadcast, and computer-assisted language learning (Zhao & Lai, 2023). However, with the arrival of technological tools such as smartphones, social media, online learning environments, virtual reality, and augmented reality, the way language teaching and learning have advanced even more (Álvarez & Auquilla, 2022). The Covid-19 post-epidemic era not only highlights the pressing requirement to keep abreast with technological advancement but also the urgency to broaden the students' learning materials using various technological tools (Mustapha et al., 2024). Thus, the technological medium has addressed the issue even better since 2020.

Literature Review

COVID-19- has significantly changed the landscape of education worldwide as it has impacted students, teachers, and educational institutions (Mailizar, et al., 2020). A combination of digital adaptability and skill was more prevalent during the pandemic. A smooth transition also took place from chalk-and-talk to accessing several multimedia learning materials online to ensure a balanced approach to teaching was implemented (Khanna, Parasher & Tripathi, 2022). However, due to the uncertainty of the pandemic's end date, educational institutions have pooled their existing multimedia instructional materials for students by sharing materials online (Mahmood, 2021).

The learning that has been dubbed into a new norm has not only accelerated online learning but has also enhanced the quality of students' learning experience through the effectiveness of multimedia content (Adeniyi et al., 2024). Jasrial, Zaim, and Thahar, (2025) elaborate that multimedia technology also offers a dynamic and interactive learning experience by incorporating videos and other multimedia elements that engage students, making the learning process more enjoyable and effective. This encourages tailor-made resources that promote diversity by meeting the needs of everyone, particularly students. The extensive use of technology has led to resourceful multimedia materials that improve comprehension of the subject matter. (Dossymbayeva, Yelubayeva, & Karabayeva, 2025). As a result, the learning

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outcome of the students also improved due to a deeper understanding of the topic (Mulyadi et al., 2021).

Additionally, through various technological tools used to meet specific learning objectives and learning settings, the learning outcomes have also improved (Van et al., 2021; Kalyani, 2024). Tuhuteru et al. (2023) stress that different types of multimedia learning with a diversity in content can also influence learning in various ways. For instance, the integration of multimedia in English affects vocabulary learning and reading comprehension (Liu, 2024); printed books have positively impacted students' comprehension and reading skills (Ntagwabira, et al., 2024), high-immersion virtual reality (VR) on vocabulary learning (Kaplan-Rakowski & Thrasher, 2024); multimedia environments had successfully enhanced writing performances (Teng & Zhang, 2024); captioning and playback speed had several significant effects on listening comprehension (Mahalingappa, Zong & Polat, 2024); website-based English learning platform had enhanced grammar of the students (Ardiel & Rusli, 2024), animated video has its positive impact on the aspects of speaking such as pronunciation, fluency, intonation, and speaking ability (Junita & Prasad, 2024) and vlogging also had its positive impact on speaking performances (Jin, 2024).

The potential of multimedia has been receiving a lot of interest as it allows the optimization of resources through the application of many online multimedia tools that allow learners to choose their learning mediums according to their interests (Eom, 2024). Stumbrienė, Jevsikova, and Kontvainė (2024) have also pointed out that multimedia instructional materials and tailor-made resources have established interesting teaching resources for students. Through the evolution of multimedia technology, the learning materials have varied as it has been well occupied too by teachers (Majumder & Beri, 2025). These multimedia materials are not only built on well-designed instructional resources, but it is also designed to cater to different types of students' ways of learning (Afkar, 2024).

The different learning needs and learning goals may accommodate the unique requirements of every student, depending on the media used to learn (Goyibova et al., 2025). Hence, a variety of media of instruction, such as printed and non-printed materials or digital instructional materials, were used to enrich and enliven the teaching and learning process (Fang, 2024). This, in turn, can attract the interest of language learners to use the materials as new ideas are integrated through technology in teaching English (Ravshanovna et al., 2024).

As for the learning outcome of the students, multimedia learning leads to better comprehension and deeper understanding of the subject matter (Maghfiroh et al., 2024). Masitoh, Fitriyah, and Mumtaza (2024) also agreed that multimedia materials using different media lead to better understanding. Indeed, through interactive technologies, multimedia learning promotes active engagement. By adding theme-specific affective features, the learning materials can also enhance learning effectiveness, positive emotions, and learning outcomes of the students. This, in turn, leads to improved cognitive processing and better learning outcomes (Zhao & Mayer, 2025).

In terms of teaching effectiveness, the utilization of multimedia leads to innovative English teaching methods (Li, Liao & Zhong, 2025). This also supports the teachers' teaching and learning performance among teachers (Zhao et al., 2024). By utilizing multimedia in teaching and learning, it fosters long-lasting connections within classroom settings (Azad, 2024).

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Educators can also enhance their teaching strategies in the class by maximizing multimedia tools to accommodate the different learning styles of the students. As a result, students' retention rate improves due to a high involvement and motivation in the class to learn the topics (Rohi & Nurhayati, 2024).

As a whole, the potential of multimedia has been receiving a lot of interest as it offers numerous benefits that enhance the learning experience in various ways (Wu, 2024). Multimedia also allows the optimization of resources, interactive multimedia learning experiences, and the reusing of learning resources (Ali, 2024). Knowing the extended benefits of multimedia in today's world, this study presents a general classification that aids the understanding of the trends of Multimedia learning and English. Undeniably, multimedia usage is proving to be beneficial in language learning and cross-cultural communication (Farida et al., 2024).

Even though there are a lot of bibliometric studies highlighting research on multimedia-related learning media and English over the last few decades, however, research has shown that there are few studies designed with bibliometric mapping techniques, which involve general Multimedia learning and English studies, in particular. The existing literature research mostly highlights only selected media as its findings.

There are researches on; Augmented Reality in Language Learning studies from year 2007 to 2019 (Tulgar et al., 2022), English mobile learning bibliometric analysis 2000-2020 (Khodabandelou, et al., 2022), research on mobile-assisted language learning (MALL) and English between 2008 to 2020 (Karakaya & Bozkurt, 2022), the evolution pattern in 3D-Animation and English between year 1984 to 2021 (Suki, et al., 2021), computer-assisted English learning (CAEL) studies from 1979 to 2023 (Mohsen, Althebi & Qadhi, 2025); linguistic studies and social media between year 2009 to 2020 (Sun, Wang & Feng, 2021) and E-books in English as a foreign language (EFL) education from 2011 to 2020 (Alice et al., 2020); to name a few.

This study aims to apply bibliometric and performance analysis to multimedia learning and English research published between 2020 and 2025 in Malaysia. Since Covid-19 has heightened the role of technology among students worldwide, particularly in the area of multimedia learning, this study is carried out to address the gap that exists in multimedia learning and English, which have been underrepresented in most bibliometric studies. All the information used in this study came from online sources, particularly the Scopus database. Using established bibliometric analysis techniques, the following set of research questions was our focus.

RQ 1: What are the research trends in multimedia learning and English according to the year of publication?
RQ 2: Who is the most influential author?
RQ 3: Which are the top contributing documents according to countries?
RQ 4: What is the top contributing journal according to document type?
RQ 5: What are the top contributing journal documents according to the subject area?
RQ 6: What is the co-occurrence of all keywords?
RQ 7: What is co-occurrence by author keyword?
RQ 8: What is the co-citation citation of the authors?
The rest of the paper is organized as follows.

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Section 2 focuses on a review of the literature.
Section 3 explores the methodology.
Section 4 presents the results.
Section 5 concludes the study.
Section 6 finally illustrates the discussions along with practical implications, limitations, and future research directions.

Research Methodology

Bibliometric analysis is a widespread method in which readers can get a big-picture view of the researched topics (Gokhale et al., 2020). Through statistical and mathematical methods, large volumes of scientific data can be analysed through this technique (Pessin, Yamane & Siman, 2022). Scholars also use bibliometric analysis for many reasons, such as to trace the patterns in articles, collaboration trends, characteristics, and regularities of the published documents (Donthu et al., 2021; Verma & Gustafson, 2020). Examining the precision in the publication trends within a specific field enables a researcher to derive novel ideas for investigation and position their intended contributions to the field (Donthu et al., 2021; de Oliveira et al., 2019).

Analysing the scientific performance of the articles, authors, institutions, countries, and journals based on the number of citations, and trends of the field studied, also makes bibliometric analysis an effective tool for identifying research gaps and prospect future research opportunities (Abdullah et al., 2023). Hassan and Duarte (2024) believe that through the cluster, in particular, co-word occurrence analysis can be a foundation for recognizing thematic relationships in publications. Thus, for these reasons mentioned, the researcher finds the analysis is a suitable technique to be used in this study.

The Scopus database was used to locate applicable research. A bibliometric analysis of the literature on "multimedia learning" and "English" has been conducted to answer the research questions. The current research on "multimedia learning and English" amidst COVID-19 from 2020 to the first quarter of 2025 was mapped using bibliometric analysis. This study also reports general descriptive statistics such as research trends in multimedia learning and English, the most influential author, top contributing documents according to countries, top contributing journal according to document type, and top contributing journal documents according to subject area. It also includes complex techniques, such as co-occurrence of all keywords, co-occurrence by authors' keywords, and co-citation citation of the authors.

Data Sources (Obtaining Data Set)

The study was initiated by querying the Scopus database. Scopus was used to search for the most related publications on "Multimedia learning and English" from the 2020 through 2025 collection. The following database search query was built and executed: TITLE-ABS-KEY (multimedia AND learning AND English AND language) AND PUBYEAR > 2019 AND PUBYEAR < 2026 AND (LIMIT-TO (LANGUAGE , "English")) AND (EXCLUDE (DOCTYPE , "re")). The first query string searching term is (multimedia AND learning AND English AND language). On April 30th, 2025, SCOPUS was consulted, and it retrieved 1013 articles. Since the Covid-19 outbreak, multimedia has impacted students' learning worldwide, particularly in the area of multimedia. Thus, the focus narrowed down to after Covid-19-year outbreak year, 2019, till to first quarter of 2025. This process yielded 406 results. Next, the

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query string was further scrutinized so that the search should be limited to the English language and exclude article reviews. The final search string refinement retrieved 400 articles, which were used for bibliometric analysis.

Data Analysis

In this bibliometric research, the VOS viewer bibliometric application was used. VOS Viewer provides text mining functionality to extract and scrutinize terms from the body of literature and help identify patterns, clusters, and influential nodes (Bukar et al., 2023). In this study, the bibliometrics was broken down into two main areas: descriptive reporting and performance analysis. In descriptive reporting research trends in multimedia learning and English, the most influential author, top contributing documents according to countries, top contributing journal according to document type, and top contributing journal documents according to subject area were extracted from the Scopus database analysis.

Subsequently, a performance analysis was carried out using VOS Viewer software. Bibliometric metadata, including co-occurrence of all keywords, authors' keyword co-occurrence, and co-citation citation of the authors, were also performed. Co-occurrence analysis helps to visualize the relationship between keywords by identifying how frequently they appear in a dataset (Gries & Durrant, 2021). Three types of co-occurrence data analysis can be retrieved using VOS Viewer. They are co-occurrences of all keywords, authors' keywords, and index keywords. However, in this study, only the co-occurrence of all keywords and authors' keywords is investigated. The purpose of the co-occurrence of all keyword analysis used in this study is to examine the frequency of keyword appearance together, within a set of text documents. Meanwhile, authors' keyword co-occurrence was also reported in this study as the researcher intends to find the relationship between keywords used by authors in their research papers, which to be presented in this study as well.

Next, the study also utilizes co-citation analysis. The purpose of co-citation is to see the frequency of cited references, cited authors, or cited sources together in the primary documents. In this study, the area of co-citation citation of the authors was also explored (Castanha, Grácio & Perianes-Rodríguez, 2024). Co-citation citation of the authors refers to how often two authors are cited together by other authors (Milman & Zhurkovich, 2024). Finally, using the VOS Viewer software, the word map of articles was drawn and presented in network visualization maps to display the following results according to research questions.

Findings and Interpretations

RQ 1: What Are The Research Trends In Multimedia Learning And English According To The Year Of Publication?

Figure 1 shows that research in multimedia learning and English has generally increased from 2020 to 2025, starting with about 49 documents (12.3%) in 2020, and a sudden increase in trend in the following year, 2021, with 83 documents (20.8%) published. It reaches a peak of over 87 documents (21.8%) in 2022 and 2024 (21.8 %), reflecting active publication during those years. However, in 2023, there was a noticeable decline to around 66 documents. (16.5 %). Interestingly, in the first quarter of 2025, the number of publications reached 28 (7.0 %). Overall, the trend suggests that research activity was strong and growing up to 2022 and 2024. The data is summarized in Table 1 and represented in Figure 1.

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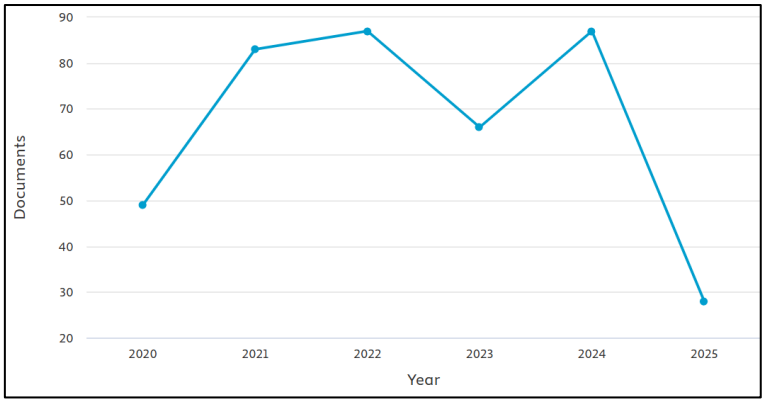

Figure 1: Trend Of Research In Multimedia Learning And English By Years

Table 1: Trend Of Research In Multimedia Learning And English By Years

Rank	Author	Number of Documents	Percentage (In %)
1	2020	49	12.3
2	2021	83	20.8
3	2022	87	21.8
4	2023	66	16.5
5	2024	87	21.8
6	2025	28	7.0

RQ 2: Who Is The Most Influential Author?

According to Figure 2, the most influential author is Yeh, H.C., with the highest number of documents (5 documents or 21 %), followed by Fu J.S. with 3 documents (12.5 %). The other authors, Aidaaja A., Alobaid, A., Amiri S.H., Amiri S.H., Belda-Medina, J., Burden, T., Collins. P, Dressen-Hammouda, D., are equally ranked after them, each with around 3 documents (8.3 %). As a whole, this ranking suggests that Yeh, H.C. is the most frequently referred to or influential author in this group, while the others have a similar but slightly lower level of influence based on document count. The data is also briefed in Table 2 below.

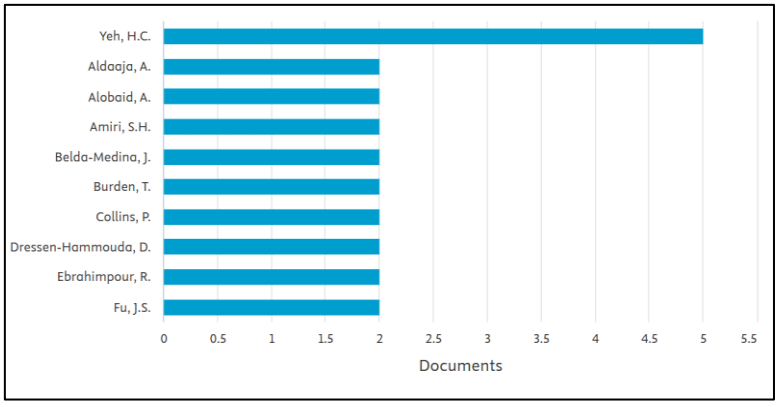

Figure 2: Top Ten Most Influential Authors

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Table 2: Top Ten Most Influential Authors

Rank	Author	Number of Documents	Percentage (In %)
1	Yeh, H.C.	5	20.8
2	Fu,J.S.	3	12.5
3	Aidaaja. A.	2	8.3
4	Alobaid, A.	2	8.3
5	Amiri S.H.	2	8.3
6	Belda-Medina,J.	2	8.3
7	Burden,T.	2	8.3
8	Collins,P.	2	8.3
9	Dressen-Hammouda,D.	2	8.3
10	Ebrahimpour,R.	2	8.3

RQ 3: Which Are The Top Contributing Documents According To Countries?

Figure 3 displays the results of the top contributing documents according to countries' analyses of multimedia learning and English. The results indicate that the highest contributing journal, with almost 45.2 % of papers, comes from China, with 142 documents. The other top four contributing documents according to countries are from Indonesia with 29 documents (9.2 %), Taiwan (27 documents or 8.6 %), the United States (26 documents or 8.3%), and India (24 documents (7.6 %). Malaysia was ranked in sixth place with 17 documents (5.4 %). Both Iran and Saudi Arabia published 14 documents (4.5 %) each. South Korea published 11 documents (4.5 %) and Spain with 20 documents (3.2 %). Table 3 summarizes the data explained above.

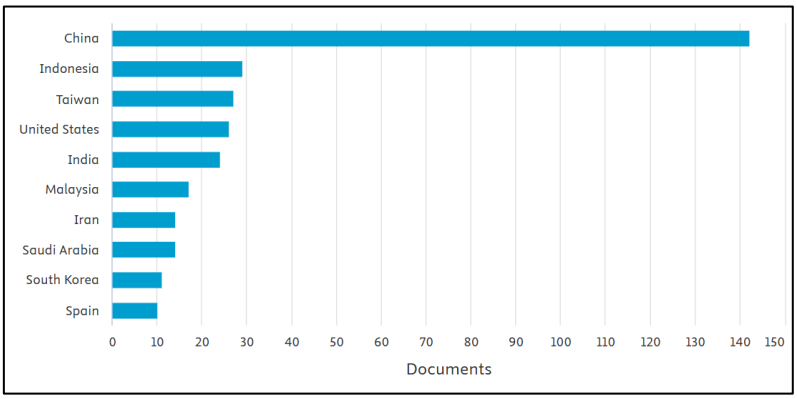

Figure 3: The Top Contributing Documents According To Countries

Table 3: The Top Contributing Documents According To Countries

Rank	Author	Number of Documents	Percentage (In %)
1	China	142	45.2
2	Indonesia	29	9.2
3	Taiwan	27	8.6
4	United States	26	8.3
5	India	24	7.6
6	Malaysia	17	5.4
7	Iran	14	4.5

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8	Saudi Arabia	14	4.5
9	South Korea	11	3.5
10	Spain	10	3.2

RQ 4: What Is The Top Contributing Journal According To Document Type?

In Figure 4, which assessed the top contributing journals according to document type, the findings indicate that 270 documents (67.5%) were published are mostly from articles, followed by 101 documents (25.25 %) of conference papers. Only a small percentage, 5.25 percent, which is 21 of the documents published, are from book chapters. The last published documents are from 1 erratum (0.25%), 3 retracted documents (0.75%), and 4 documents from conference review (1%). The data is also represented in Table 4 below.

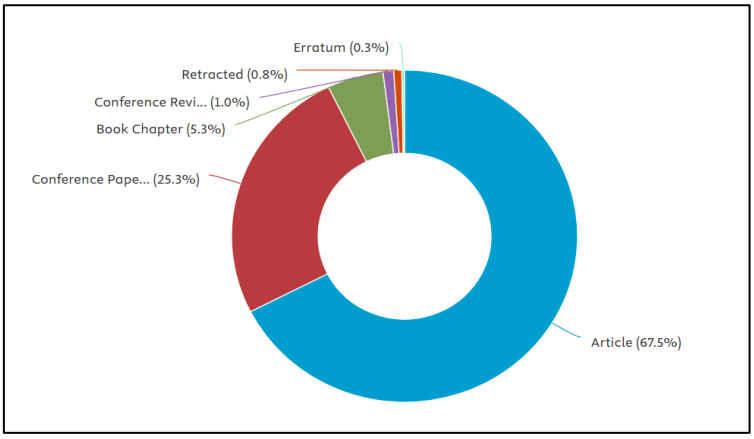

Figure 4: Top Contributing Journal According To Document Type

Table 4: Top Contributing Journal According To Document Type

Rank	Author	Number of Documents	Percentage (In %)
1	Article	270	67.50
2	Conference Paper	101	25.25
3	Book Chapter	21	5.25
4	Conference Review	4	1.00
5	Retracted	3	0.75
6	Erratum	1	0.25

RQ 5: What Are The Top Contributing Journal Documents According To The Subject Area?

The pie chart in Figure 5 illustrates the distribution of documents related to multimedia learning and English across various academic fields. Social Sciences with 210 documents (27.6%) became the significant contributor, followed by Computer Sciences, 190 documents (25.0%) dominated the research. Engineering with 90 documents published (11.8%) and Arts and Humanities, 87 documents (11.4%), also play a key role in reflecting interdisciplinary interest. Other areas like Mathematics with 44 documents published (5.8%), Psychology, 25 documents (3.3%), and Decision Science, 25 documents (3.2 %), show moderate involvement, focusing on learning analytics and cognitive factors. Smaller contributions come from Physics and Astronomy, with 23 documents (3%), Business Management and Accounting with 15 documents (2%), and Energy with 7 documents (0.9%), indicating a niche publisher. Overall,

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the data emphasize that multimedia learning in English is a highly interdisciplinary field, driven by both pedagogical and technological advancements. The data is also condensed in Table 5 below.

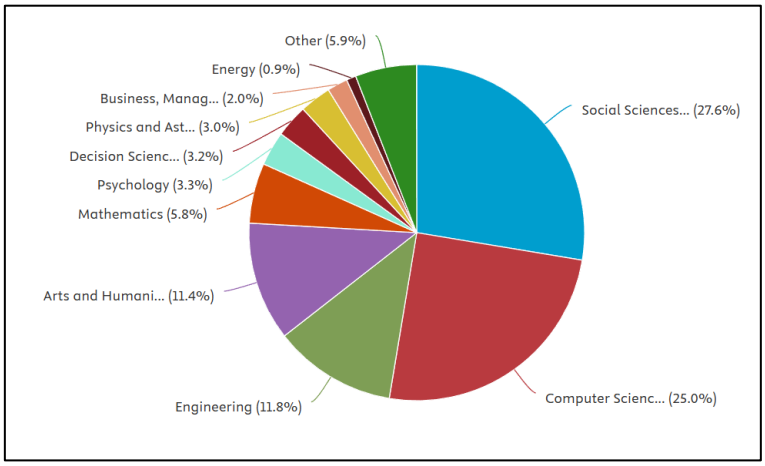

Figure 5: Top Contributing Journal Documents According To Subject Area

Table 5: Top Contributing Journal Documents According To Subject Area

Rank	Author	Number of Documents	Percentage (In %)
1	Social Sciences	210	27.6
2	Computer Sciences	190	25.0
3	Engineering	90	11.8
4	Arts and Humanities	87	11.4
5	Mathematics	44	5.8
6	Psychology	25	3.3
7	Decision Science	24	3.2
8	Physics and Astronomy	23	3.0
9	Business, Management, and Accounting	15	2.0
10	Energy	7	0.9 %

RQ 6: What Is The Co-occurrence Of All Keywords?

Figure 6 demonstrates the occurrence of multimedia learning and English-related topics from 2019 to the first quarter of 2025. It shows a wide range of topics that have been covered during this time frame. In this section, "What is the co-occurrence of all keywords?". The thicker lines and larger circles portrayed in the network visualization map (co-occurrence) analysis show us that these keywords are used more frequently in the keyword search. In the dataset of 400 articles, a total of 2,352 keywords were used, and 99 met the threshold. The final analysis retrieved 5 clusters of 90 items.

The first cluster (red nodes) comprised 28 elements with the most frequently occurring terms: adversarial machine learning, blended learning, collaborative learning, contrastive learning, COVID-19, digital storytelling, educational technology, EFL, EFL learners, and English as a foreign language. Meanwhile, the second cluster (green nodes) consisted of 24 items that

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contained most terms such as augmented reality, computational linguistics, computer, computer-aided language, and deep learning.

The third cluster (blue nodes) identified 20 elements with autonomous learning as the most frequently occurring term. The fourth cluster (yellow nodes) contained 11 elements with the most frequently occurring application programs, artificial intelligence, computer technology, English language, and language education. The final fifth cluster (purple node) recognized 7 elements, among which consist of computer-aided instruction, e-learning, and foreign language learning. As a whole, the co-occurrence of all keywords that have been explored is represented in the following Figure 6.

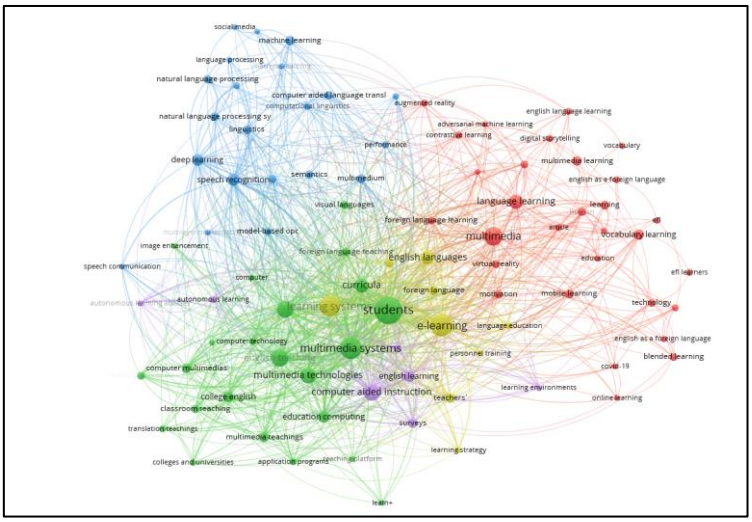

Figure 6: Co-occurrence Of All Keywords

RQ 7: What Is Co-occurrence By Authors' Keywords?

In Figure 7, "What is co-occurrence by authors' keywords?" is answered. Co-occurrence by authors' keywords refers to the frequency with which specific keywords appear together in the author keywords section of publications (Klarin, 2024). A total of 1,201 keywords and 27 thresholds were met. The final analysis resulted in 6 clusters of 27 items. The first cluster (red nodes) comprised 6 items. The 6 most common words in the first cluster comprised artificial intelligence, deep learning, English teaching, machine learning, natural language processing, and speech recognition.

In the following cluster, the second cluster (green nodes) is comprised of 6 elements as well, with the most frequently occurring terms consisting of blended learning, English as a foreign language, English learning, higher education, mobile learning, and motivation. Meanwhile, the third cluster (blue nodes) also recognizes 6 items with augmented reality, computer, digital storytelling, English language learning, language learning, and vocabulary. However, the fourth cluster (yellow nodes) consists of 5 elements with the most frequent occurrence of authors' keywords: e-learning efl, efl learners, technology, and vocabulary learning.

The fifth cluster (purple node) recognized only 2 elements, which are English as a foreign language and multimedia learning, as compared to the sixth cluster (light blue node), which recognized only 2 elements, English language teaching and multimedia. The data above is

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represented in the following network visualization of co-occurrence by authors' keywords is shown in Figure 7 below.

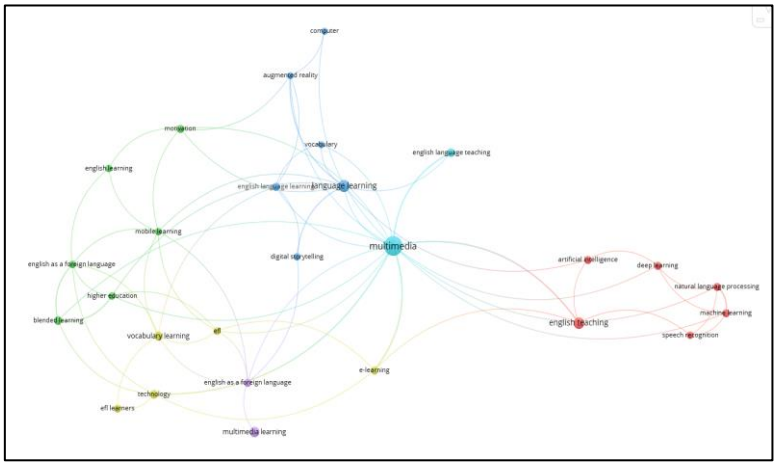

Figure 7: Co-occurrence By Authors' Keywords

RQ 8: What Is The Co-citation Citation Of The Authors?

Co-citation refers to a set of items (authors, documents, journals, etc.) that are selected to represent a research area. A co-citation citation of the authors, in particular, refers to the frequency of two authors frequently cited simultaneously through a set of articles (Bronk, Reichard & Qi Li, 2023). It also suggests that their research notion is dominant and interrelated within the field. (Castanha, Grácio & Perianes-Rodríguez, 2024). Thus, in this section, the research question on the co-citation citation of the authors is answered. A total of 21,862 keywords with 53 thresholds were met. The final analysis result yielded 53 items in 6 clusters.

In the first cluster (red nodes) 20 elements with the most frequently authors cited together were Chen Y., Li D., Li H., Li X., Liu J., Liu Y., Wang C., Wang J., Wang l., and Wang S. Where else, in the second cluster (green nodes), consisted of 16 items consist authors like Boers F., Dornyei Z., Ellis R., Grass S., Lee H., Mayer R.E., Moreno R., Patio A., Plass J.L., and Schmitt N. However, the third cluster (blue nodes) acknowledged 6 elements consisting of Chandler, P., Kaluga, S., Mayer, R.E., Paas, F., Sweller, J., and Talavan, N.

The fourth cluster (yellow nodes) consisted of 6 items with the most frequently occurring co-citation citations of the authors: Hwang G.J., Hwang W.Y., Kress G., Lions J.I., Shadiev R., and Yeh H.C. In the fifth cluster (purple node) it has been identified only 3 elements. They are Xie H, Zhang R., and Zou D. The sixth and final cluster (light blue node) recognized only elements; Bus A.G. and Sun H. The following network visualization of the co-citation citation of the author's map is shown in Figure 8 below.

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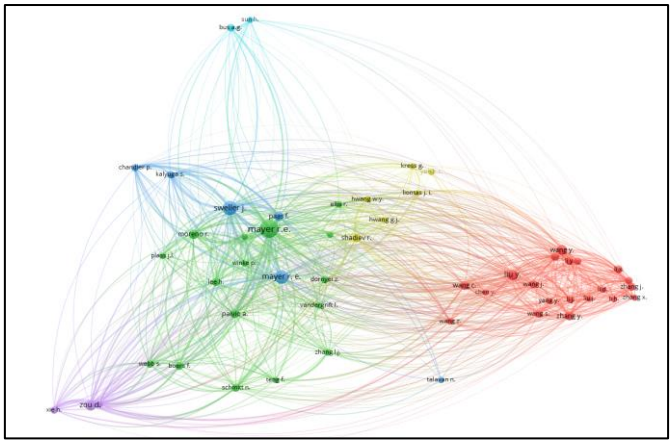

Figure 8: Co-citation Citation Of The Authors

Conclusion

The study presented a thorough view of the literature on 'multimedia learning and English' for the past 6 years, from 2019 to the first quarter of 2025, using the Scopus database. Out of 1,013 articles,400 articles were scrutinized for the use of this study. Valuable findings presented in descriptive and performance analysis form, in the fields of multimedia learning, offer opportunities and motivation to the researchers to investigate the gap that still exists in the scientometrics field.

For research question 1, on the research trends in multimedia learning and English according to the year of publication, it was through this study, identified that the publication on 'Multimedia learning and English' reaches a peak of over 87 documents (21.8%) in 2022 and 2024 (21.8 %), indicating an active publication during those years. However, in 2023, there was a slight decline to around 66 documents (16.5 %). Overall, the trend suggests that research activity was strong and rising from 2022 to 2024.

For research question 2, Yeh, H.C., with the highest number of documents (5 documents or 21 %), is considered the most influential author. As for the top contributing documents according to countries, in research question 3, China recorded the highest contributor for the journals, with almost 45.2 % of papers or 142 documents having been published in areas related to multimedia learning and English. Meanwhile, the top contributing journals according to document type (research question 4) are articles with 270 documents, comprising 67.5% of publications. In research question 5, the top contributing journal document according to subject area is Social Sciences with 210 documents (27.6%), becoming the significant contributor.

In terms of performance analysis, research question 6, for the co-occurrence of all keywords, a total of 2,352 keywords were used, with 99 thresholds met. The performance analysis resulted in 5 clusters of 90 items. In research question 7, the co-occurrence by authors' keywords, a total of 1,201 keywords and 27 thresholds were met, with the final analysis resulting in 6 clusters of 27 items. In the final analysis, research question 8, co-citation citation of the authors, was answered. A total of 21,862 keywords with 53 thresholds were met. Then, the final analysis result yielded 53 items of 6 clusters.

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In light of the results, it is identified that the boom of multimedia materials has also allowed language learners to explore a variety of materials presented online and offline, particularly after the Covid-19 pandemic. In regard to that, the literature studies of multimedia learning picked up eventually, right after COVID-19, mostly from 2022 to 2024. The researchers also published a lot of articles during those years, with the Social Science subject area being the significant contributor in the studied field. However, in terms of publication, China has the highest number of journals as it paved the way to extensively exploring multimedia learning and the English language in particular, to enhance the teaching and learning of students. Thus, the availability of digital resources is also vital for a digital ecosystem to be fully functioning, be in an online or offline learning setting.

Research Implications and Recommendations

Practical Implications

The use of Multimedia learning in the English language has catapulted during the Covid 19 pandemic. Online and offline learning during the outbreak has redefined education in many ways (Dhawan, 2020). The booming of multimedia learning has paved the way for material access to a wider range of educational materials (Kaakandikar, Sakhare & Prasad, 2025). As a result, students now have access to a diverse range of educational materials as they navigate through a rich tapestry of multimedia learning options (Ezeanoloe, 2025). The widespread use of multimedia learning also allows teachers to provide English learners; access to maximize digital tools (Egamberganova, 2025).

Educational organizations play a role in voicing out the management's views on upgrading related facilities at their institutions. Through studies on existing digitalization policies to lessen the detrimental effects of Covid-19, it is important to use appropriate educational technology-related pedagogies to enhance teaching and learning in the class (Treve, 2021). Consequently, administrators, policymakers, and governmental bodies can invest and give necessary assistance to teachers to encourage them to implement new technology in their teaching and learning in the classroom. It is also recommended that educators be provided with necessary professional development training focused on pedagogical educational technology approaches, to upgrade themselves with the latest technologies and methods (Akgunduz & Kinik Topalsan, 2024).

Another way of assisting teachers is through the involvement of the curriculum designers and educators. Both parties can sit together and discuss the best method to enhance instructional teaching and learning materials using the latest educational technology pedagogy. When it comes to content, educationists still need to be consulted as these are the groups of people meeting the end users of any technological products. Thus, need analysis can be carried out before the designing and development of educational products are developed using appropriate technology (Yang et al., 2024).

Finally, educational institutions play a significant role in bridging the gap between teachers' teaching pedagogy and educational technology by being the sole voice of teachers, in creating an avenue for educationists and curriculum designers to meet. Through professional development and the invitation of experts to educational institutions, a learning community can be initiated. How far is this being explored? This will be an area to be investigated by future

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researchers in identifying the research trends of English teachers and multimedia learning professional development.

Limitations And Future Research

The limitation of this research is that the analysis derived in this article is based on 400 articles from the Scopus database only, ranging from 2019 to the first quarter of 2025, using 'multimedia learning and English' keywords. Future research may extend the study using other databases such as WOS. Upcoming studies may also use other keywords in the preliminary search to extract additional publications on how far English teachers are involved in multimedia learning professional development. The implementation of technology-based training can also be approached from the educational equity, SDG 4, perspective.

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