Arabic Language and Communication: Bibliometric Analysis

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Abstract
The effectiveness of language acquisition for non-native speakers demands a focus on learners and their participation in the learning process, such as cooperative learning, the debate and discussion technique, and the problem-solving approach. The communication strategy is based on the specified approaches. The purpose of the research is to include communication or the communicative approach into the learning process so that students may grasp what they are taught as fast as possible and communicate effectively with others. Experiments described in the articles demonstrate that direct connection between the instructor and the students, as well as an intimate relationship between them, enhances the learning process, helping students to learn more quickly and retain the information they acquire. Through bibliometric analysis, this research explores the communication strategy in depth and illustrates its value for educational process preparation. This study extended all studies from 2007 to 2020 using the Vosviewer programme for visualising similarities. As reported in the Scopus database in August 2022, a total of 1371 articles were analysed to determine the most intriguing topics covered by the journal. The findings indicate that teaching languages to non-native speakers necessitates a communication style, and research in the same subject has proved the efficacy of the communication approach in acquiring the target language. In addition, study findings in the same area demonstrated the efficiency of the communication strategy for acquiring the target language. Additionally, pupils' confidence in their ability to learn the target language has increased. Numerous specialists concur that a communication system is essential for bridging the gap between deaf and hearing persons. Other researches have proved the efficacy of using nonverbal communication into the teaching and learning of Arabic.
Keywords: Language Acquisition, Arabic Language, Bibliometric Analysis

Introduction

Finding the ideal approach to teach a language and selecting a variety of techniques to pique the interest of students and learners requires a great deal of consideration. The techniques of teaching languages have become the most applicable sectors influenced by the advancement of scientific study in the field of current linguistic theories or in the domains of educational psychology and linguistic research about the processes of gaining linguistic talent. Benefiting from research in the different disciplines relevant to this linguistic and educational sector is necessary for the progress of Arabic language teaching techniques, which necessitates the joint efforts of researchers in these domains (Abdel Majid, 2016). The significance of educational tools in elucidating knowledge and capturing the interest of students is not a secret, and I saw this throughout my involvement with the educational process. Students are delighted when they are able to chat with the instructor or their classmates in the classroom. Therefore, the teacher must choose the suitable approach or ways in a single lecture in order to accomplish the required and desired outcomes of the educational process. We see that the most effective techniques for teaching Arabic are those that include students in the learning process, such as cooperative learning, discourse and discussion, and problem-solving. One of the researchers stated that the best educational materials are those that teachers and students co-create during the implementation of the language educational course, so that the teacher involves his students in planning the contents of the course and shares roles with them, and that the teacher's role remains central (Arabi, 2012, p.48).

The approaches that contribute to the consolidation of the interaction between students, professors, and scientific content must also be selected in order to learn it quickly. The communicative method is one of the modern educational methods used to develop students' language skills. The communicative method is a method or technique used to teach foreign languages. This method demonstrates the efficacy of communication in teaching language in general and the Arabic language in particular, which relies on language as a means of communication. The communication process encompasses a variety of activities, such as looking for information, expressing remorse, and expressing likes and dislikes. As a result, this research was done to examine the use of the communication technique in teaching Arabic to non-native speakers.

- Raising the student's ability to use language in a meaningful and meaningful way and benefit from it in daily life.
- Rehabilitating the learners and providing them with the ability to communicate with the owners of the original language when they travel to their countries and live with them in their daily lives.
- Develop the language of students and provide ways and means to develop students' communicative skills such as providing the modern school curriculum.
- Raising learners' self-confidence by developing their oral listening skills as well as developing their reading and writing skills.
- Training the teaching staff and developing their professional abilities in communication to achieve the desired goals.

Towards this end, the aims of this research are to assess Scopus-indexed online learning publications using bibliometrics and visualisation analysis. In addition, all data for the present study were acquired from Scopus, the world's most comprehensive collection of abstracts and citations for peer-reviewed research. Therefore, several major publications in Arabic

language and communication were included in this study data. This approach allows us to see the evolution of research interests in Arabic language and communication. In addition, this work visualises and investigates the link between scientific collaboration amongst significant contributors to Arabic language education and communication, which was unavailable in prior studies.

We aimed to respond just to the following study questions:

- What has been the distribution of Arabic language and communication curriculum by year over the past decade?
- What are the most relevant journals and authors in Arabic language and communication?
- What are the most productive countries in the Arabic language and communication research area?
- What are the primary research keywords for the last decade of Arabic language and communication?

Materials and Methods

The purpose of this review was to identify the most prolific studies conducted in the field of Arabic language and communication research. In order to do this, a bibliometric analytic evaluation was conducted for the purposes of this research. On August 28, 2022, this research was conducted. In this search, a database was employed. Initial study in the field of Arabic language and communication found 1,474 papers. "important" terms (Arabic language AND learning AND communication) were used as keywords. This study spanned fifteen years, from 2007 to 2021. This research also examined (SUBJAREA, "SOCI"); OR LIMIT-TO (SUBJAREA, "COMP"); OR LIMIT-TO (SUBJAREA, "ARTS"). The investigation used just English-language articles; no other languages were considered. In addition, a total of 772 publications from the field of Arabic language and communication studies were included for this analysis.

The Bibliometric Analysis

In this research, bibliometric analysis was also used. Bibliometric analysis was used to examine the most frequently used keywords, the most cited journals, the most published journals, the journals that published the most studies on the subject, the countries that conducted the most studies on the subject, the publication cooperation between countries, the key- words used and their relationship, the most cited authors, the relationship between the authors, the journals that were jointly cited, and the most published areas. One of the most popular applications for visualising bibliometric networks, VOSViewer, was utilised to disclose the network visualisation in the study. This review is being conducted for the following reasons: First, online learning has developed into an enticing study field with an increasing number of studies. Consequently, it is necessary to evaluate the topic organisation of such a subject field by using a precise machine learning technique that can automatically analyse vast amounts of recorded literature material. The present study is being conducted to assist shed light on what has been addressed and the current developments in online education.
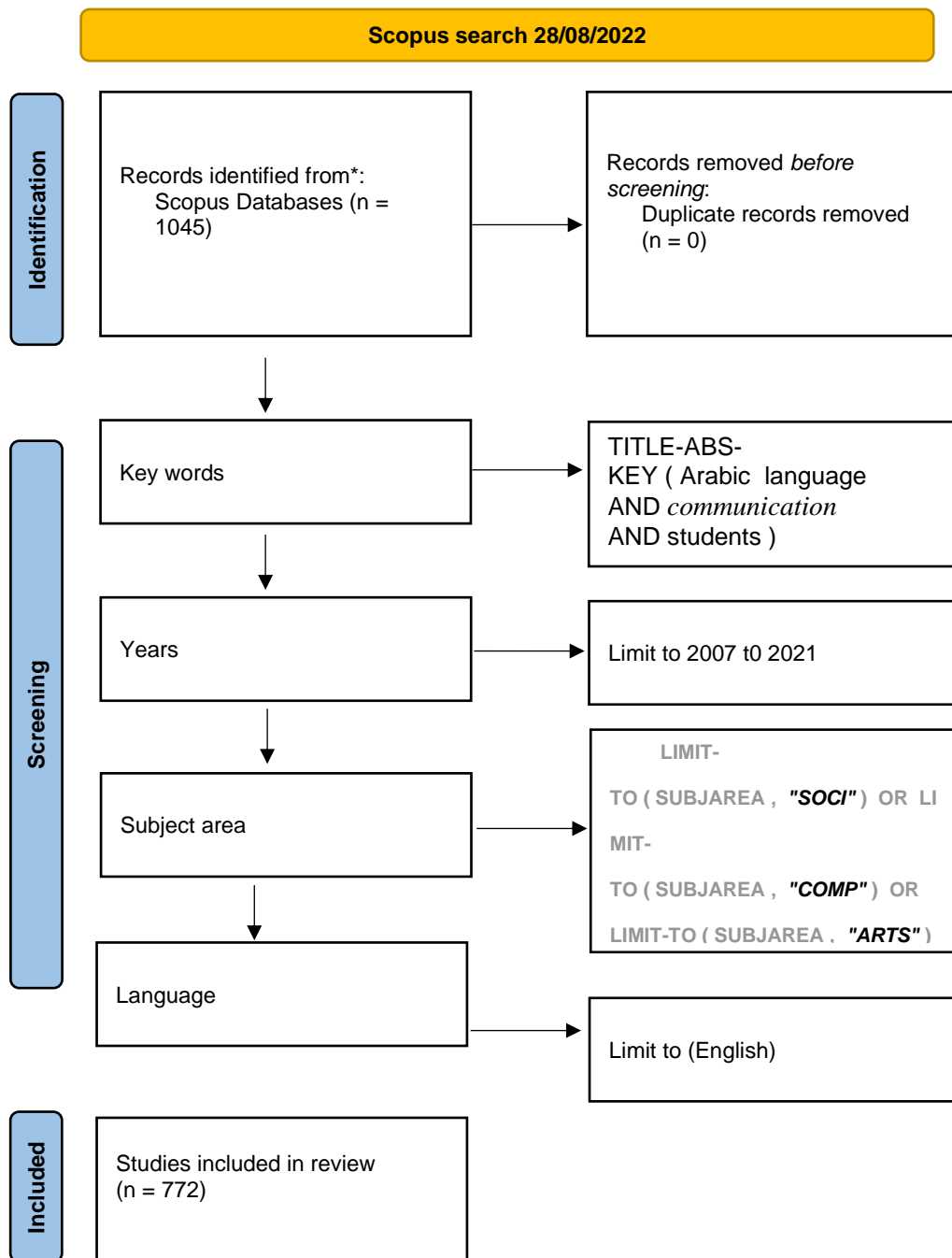
Figure 1: PRISMA Framework

Table 1
Inclusion and exclusion criteria

inclusion criteria	Keywords + any related keywords
exclusion criteria	Medical fields Engineering fields Conference papers Nonindexed papers

Findings
Research Question 1
What is the distribution of Arabic language and communication publications by years for the last decade? To address the first result, an examination of the publication year of the publications from the preceding decade was done. It was observed that the majority of papers were published in the last two years; in 2021, 102 publications on Arabic language and communication were published; in 2020, 100 publications were published on Arabic language and communication; and in 2019, 72 publications were published on Arabic language and communication. The next years saw the distribution of the remaining publications, as seen in Figure 2. For instance, it was anticipated that 102 Arabic language and communication journals will be published in 2020. This comparison reveals a significant disparity, thus the number of publications in 2021 was 102, while the number of papers in 2007 was 28. Additionally, he said that the amount of papers in 2020 will exceed 100 sheets.
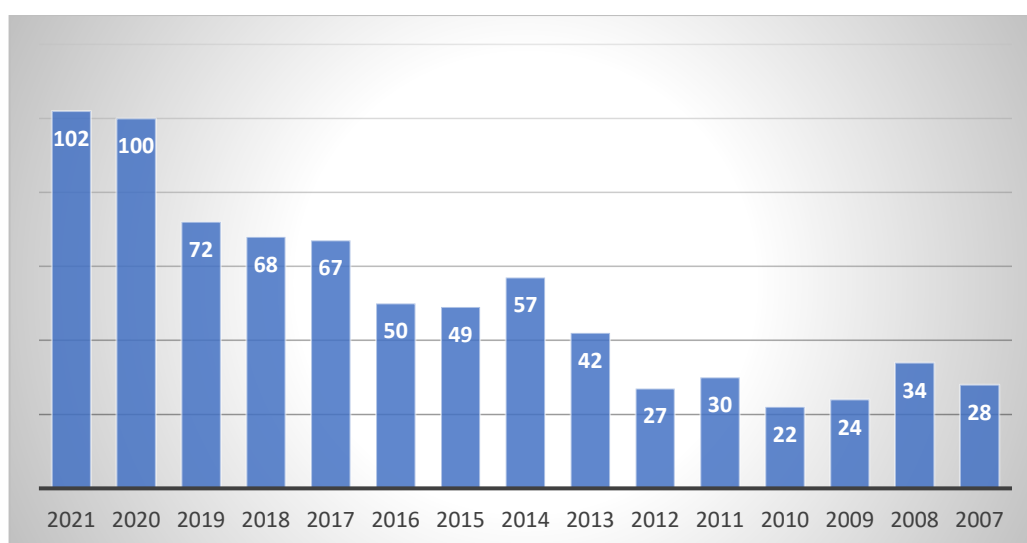

Figure 2: publications by years

Research Question 2
What are the most relevant Journals and authors in Arabic language and communication? As shown in Table 2, the analytical criteria for the content analysis of the most cited journals were "Total Publication," "Total Citation," "Cite Score of the journal," "The most cited article," "Times cited," and "Publisher."

Table 2
The top 10 highly productive journals on Arabic language and communication in the years (2007–2021)

Journal	TP	TC	Cite score	The most cited article	Times cited	Publisher
Lecture Notes In Computer Science Including Subseries Lecture Notes In Artificial Intelligence	81183	172674	2.1	Medical Transformer: Gated Axial-Attention for Medical Image Segmentation	43	Springer Nature

And Lecture Notes In Bioinformatics				*Open Access*		
Advances in Intelligent Systems and Computing	26852	26852	0.9	A Pioneer Approach for the Evaluation of Antihypertensive Drug Combinations Through Fuzzy PROMETHEE Method	0	Springer Nature
Communications in Computer and Information Science	21465	18992	0.9	Fighting an Infodemic: COVID-19 Fake News Dataset	41	Springer Nature
Procedia Computer Science	8747	30930	3.6	Deep Learning in Image Classification using Residual Network (ResNet) Variants for Detection of Colorectal Cancer *Open Access*	37	Elsevier
ACM International Conference Proceeding Series	44197	44929	1.0	Findings of Shared Task on Offensive Language Identification in Tamil and Malayalam	31	ACM
IEEE Access	50910	341106	6.7	A Term Weighted Neural Language Model and Stacked Bidirectional LSTM Based Framework for Sarcasm Identification	117	IEEE
Proceedings - ICASSP, IEEE International Conference on	6711	39060		SA-Net: Shuffle attention for deep	51	IEEE

Acoustics, Speech and Signal Processing				convolutional neural networks		
GEMA Online Journal of Language Studies	227	367	1.6	Persuasive strategies of jordanian government in fighting COVID-19	5	Universiti Kebangsaan Malaysia
Asian EFL Journal	779	773	1.0	Full-time online assessment during COVID -19 lockdown: EFL teachers' perceptions	12	Asian EFL Journal Press
Babel	160	72	0.5	Understanding intervention in fansubbing's participatory culture : A multimodal study on Chinese official subtitles and fansubs	2	John Benjamins Publishing Company
International Arab Journal of Information Technology	448	868	1.9	Parallel scalable approximate matching algorithm for network intrusion detection systems	12	Zarka Private University

Note: TP = Total Publications, TC = Total Citation.

The most productive Arabic language and communication journal was "Lecture Notes In Computer Science Including Subseries Lecture Notes In Artificial Intelligence And Lecture Notes In Bioinformatics" with 81183 total publications and 172674 total citations. This was followed by "Communications in Computer and Information Science" with 21465 total publications and 18992 total citations. Additionally, the distribution of the most productive Arabic language and communication periodicals is provided in Table 2. In contrast, RQ2 also researched the most productive researchers in the field of Arabic language and communication. "Author," "Total Publications," "h-index," "Total Citations," "Current Affiliation," and "Country" were selected as the analytic criteria for the content analysis of the prolific writers in the Arabic language and communication study field.

Research Question 3
What are the most productive countries in the Arabic language and communication research area? This comparison reveals that the United States has engaged in the most research, with

a total of 140 studies, while Malaysia and the United Arab Emirates have participated in less studies, with 27 and 30, respectively.
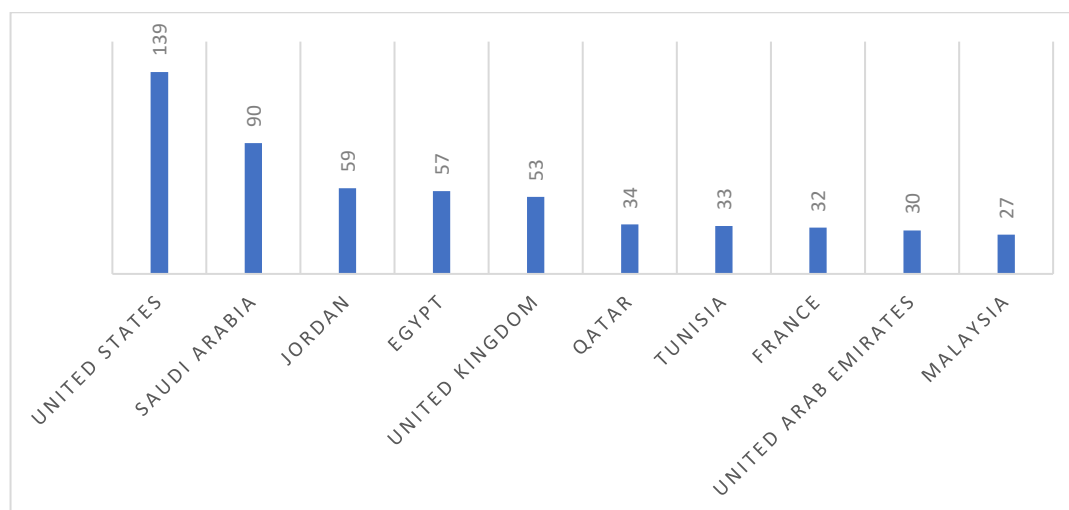

Figure. 3. Country and research field base Publication

Figure 3 depicts the nations and fields publishing base. There are three groupings of nations in the literature with the largest number of published publications. The United States and Saudi Arabia have conducted the most research with 90 publications, followed by Jordan and Egypt, the United Kingdom, and Qatar. Other nations are shown in figure 3.

Table 3
Top 10 countries and educational institutions

Country	educational institutions	TP
United States	U Baylor College of Medicine, School of Medicine, Houston, TX, United States	139
Saudi Arabia	University of Limerick, Limerick, Ireland	90
Jordan	Macquarie University	59
Egypt	University of Santo Tomas	57
United Kingdom	Public Health Institute, Hacettepe University, Ankara, Turkey	53
Qatar	College of Engineering, Qatar University, Qatar	34
Tunisia	Jouf University, Department of Computer Science, Tabarjal, Saudi Arabia	33
France	Alexandria University, Alexandria, 21545, Egypt	32
United Arab Emirates	Zayed University, Abu Dhabi, United Arab Emirates	31
Malaysia	Universiti Putra Malaysia, UPM Serdang,	27
Germany	Universität Hamburg, Hamburg, Germany	26

Research Question 4
What are the primary research keywords for the last decade of Arabic language and communication? For the bibliometric analysis of the most frequently used keywords, "Co-

occurrence" was chosen as the kind of analysis, and "Authors keywords" was specified as the unit. According to Figure 4, 400 keywords have been extracted from the data set in this instance.
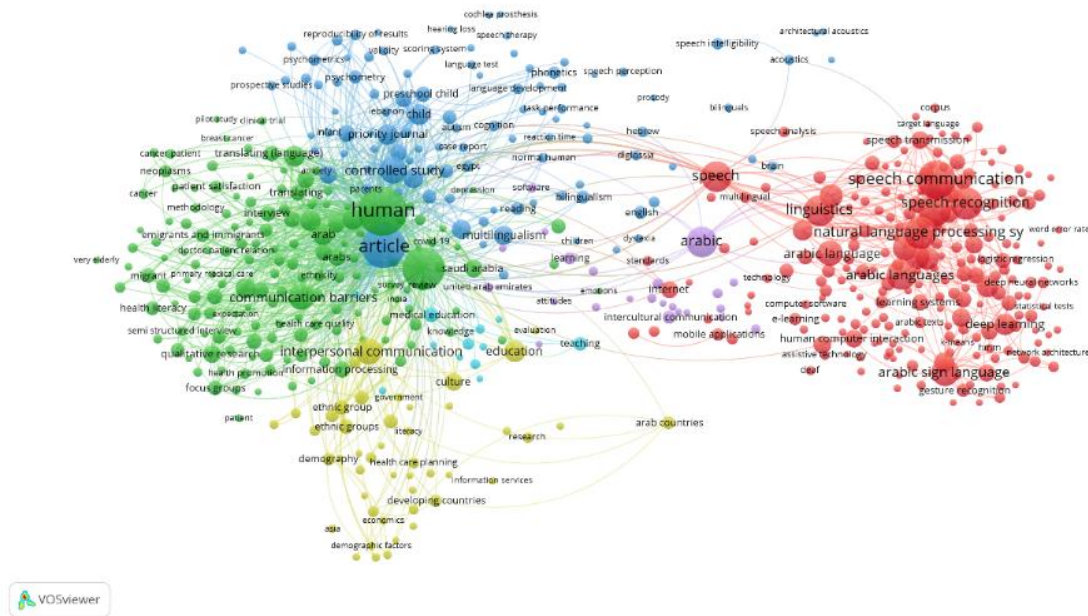

Figure. 4. Analysis results of publications by keywords

"Arabic language communication" (Human occurrences "Oc" = 226), "Article" (Oc = 182), "Language" (Oc = 167), "Controlled study" (Oc = 67), "Interpersonal Communication" (Oc = 66), and "Communication Barriers" (Oc = 61) are the keywords utilised in the research shown in Figure 4. Following these subjects were Psychology, Speech, and Major Clinical Study.

Table 4
Top 10 countries and occurrences

	Keyword	occurrences
1	Human	226
2	Artikal	182
3	Language	167
4	Controlled study	67
5	Interpersonal Communication	66
6	Communication Barriers	61
7	Psychology	40
8	Speech	91
9	Adolescent	42
10	Major Clinical Study	40

Discussions
This research attempted to determine the link between the ways of teaching Arabic language and communication between 2007 and 2021, as well as the amount to which these approaches aided in the development of learners' language abilities, particularly their

speaking ability. It was observed that the majority of the papers were published in the last two years; in 2020, a total of 100 publications concerning Arabic language and communication publications were published; in 2021, a total of 102 publications concerning Arabic language and communication publications were published. This study review gives an overview of The presence of a favourable association between methodologies Teaching Arabic Language and Communication using content analysis and bibliometrics, based on the 1270 research papers retrieved from the Scopus database. This examination of publishing sources suggests investigating new communication options across social media platforms. Dua' Ghosheh Wahbeh and others, 2021 Sign language has become the most popular mode of communication among informants. (Budiarti et al., 2021) and (Budiarti et al., 2021). The findings offered educators and education policymakers with important insights into communication patterns that may make education more inclusive for deaf individuals. Numerous specialists concur that the employment of a communication system is essential for bridging the gap between deaf and hearing people, as non-deaf individuals cannot communicate using sign language. Therefore, researchers, deaf-mutes, parents, and the deaf-mute community strive for a translation-based two-way communication system with cheaper expenses. (Souha, et al., 2021), Others argued that successful communication relies on the teacher's verbal and nonverbal communication skills. In addition to verbal communication, the use of nonverbal communication will increase the efficiency of teaching and learning. Using the t-test, they determined that students in the treatment group significantly outperformed those in the control group. The success of the treatment group demonstrates the efficacy of incorporating non-verbal communication into the teaching and learning of Arabic. It is believed that these findings would prepare instructors to pay attention to non-verbal communication throughout the teaching and learning process. (Zawawi Ismail, 2020). The provision of a conversational environment similar to the culture and society of native speakers, which makes the learning process practical and applicable, planning the creative use of language ability, and learners' practical and continuous language reproduction, according to a group of researchers, are the most significant factors in the mastery of second languages. (Soheila et al., 2015). In a research based on an appropriate model called ATN-D in the three domains of language learner, teacher, and style to build communication skill in terms of needs and difficulties, language learners, teachers, and teachers' styles were examined. In applying this theory, they determined that appropriate dialogue-directed manner, correct use of grammatical structures, strengthening and suggestion for ability in applying proper expression in special social situations, ability in beginning, entering, cooperating, and concluding a conversation, as well as ability in developing a contact with correcting the conversational process, etc. play a significant role in learning two oral skills (speaking and listening) in Arabic la (Tahmasebi et al., 2015)

The findings demonstrate that Lecture Notes In Computer Science Including Subseries Lecture Notes In Artificial Intelligence And Lecture Notes In Bioinformatics was the most prolific journal about Arabic language and communication, followed by "Communications in Computer and Information Science." It turns out that the journal with the most published articles with the same title is Lecture Notes In Computer Science Including Subseries Lecture Notes In Artificial Intelligence And Lecture Notes In Bioinformatics, which issued twenty-nine articles, followed by three journals: Advances In Intelligent Systems And Computing, Communications In Computer And Information Science and Procedia Computer Science, each of which issued twelve articles. We see that 80 percent of the writers were from Arab nations.

It turns out that the United States engaged in the greatest number of studies, with 140, while Malaysian researches and United Arab Emirates searches had a significant reduction. Arab nations such as Saudi Arabia, Jordan, Egypt, Qatar, Tunisia, United Arab Emirates, Morocco, Algeria, Kuwait, and Palestine seem to be the most prolific producers in this field. Several non-Arab nations, including the United States, the United Kingdom, France, Malaysia, Germany, Australia, Indonesia, and India, have produced works on this issue. What diversity-related terms have been used in Arabic language and communication during the last decade?, for the bibliometric analysis of the most frequently used keywords, it was determined by applying terminology analysis to the titles and abstracts of the publication under study, so that we can accurately analyse the terms in relation to the main topics and research trends in the field of Arabic language and communication of situations.
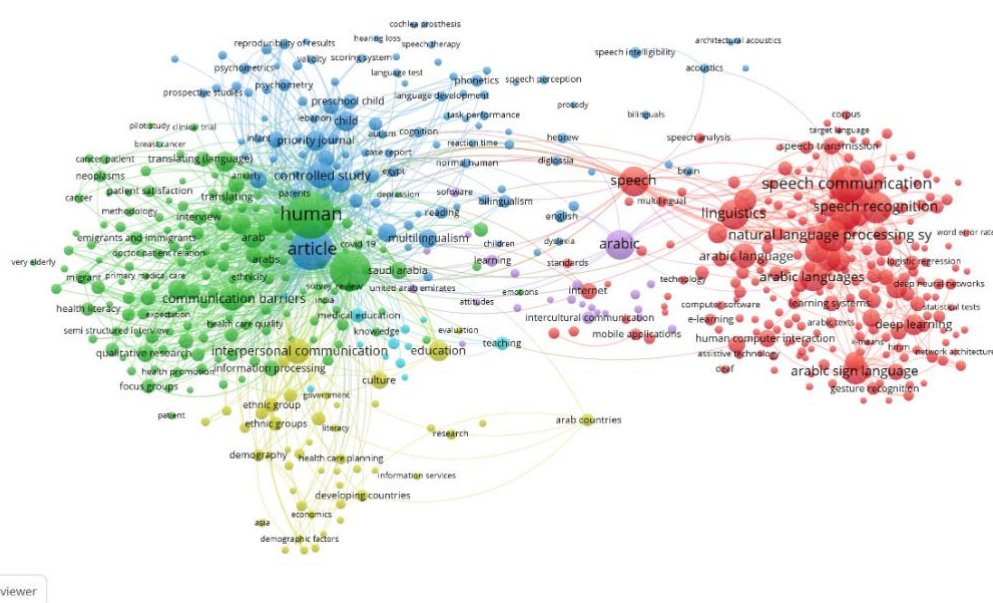

Figure 8. Analysis of the results of publications by keywords

Figure 8 indicates that the topic "Arabic language and communication" used the following terms: "Human", "Article", "Language", "Controlled Study", "Interpersonal Communication", and "Communication Barriers". Following these were Psychology, Speech, Adolescent ,and Major clinical research. Moreover, only "Language," "Controlled Study," "Interpersonal Communication," and "Communication Barriers" have been utilised as search criteria to retrieve data. Nevertheless, utilising specific search phrases might result in a more limited data collection. Consideration was given to all future technologies that may be used to Arabic language and communication.

Conclusion
Examining the studies that dealt with learning and its relationship to communication or communication revealed that there is a close relationship between the success of learning science and good communication, and social communication machines must also be provided to achieve effective communication, which aids in the development of the personal and cooperative abilities of language students. It also promotes mutual respect among language students, as well as their self-confidence and independence in studying Arabic. This suggests

that the quality of the communication process or the number of communication tools has a significant positive impact on student learning and that they will grasp the material completely. This study recommends that educational institutions prepare as many means of communication as possible, and also that they choose strategies based on serious and fruitful communication between learners and the teacher, as well as between learners among themselves, ensuring that effective communication with speakers of foreign languages leads to mastery of second languages; we also recommend developing the ability of students and teachers to communicate effectively with speakers of foreign languages.

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