

Evolution of Forensic Linguistics Publication: From a Europe and North America Continent (1980 – 2021)

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ABSTRACT: *Forensic linguistics as a field is very much still growing and evolving. This bibliometric analysis aims to identify the most author's organizations published Forensic Linguistics from 1980 to 2022, the most frequently explored topics in Forensic Linguistics research from 1980 to 2022, the most highly publications cited in Forensic Linguistics research from 1980 to 2022, the most productive countries in Forensic Linguistics research publication since 1980 up to 2022. The data obtained in this bibliometric analysis are from the Scopus database. By using Vosviewer 1.6.18 software, the 341 articles were extracted from www.scopus.com which are explored on February, 16 2022. The keywords used are "Forensic Linguistics" OR "Legal Linguistics". Research articles found based on the keywords are from 1980 to 2022. The author's organizations which publish the most Forensic Linguistics research throughout the year are University of Birmingham United Kingdom, Georgetown University United States, and Aston University United Kingdom. The most frequently explored topics in Forensic Linguistics research throughout the year are legal linguistics and corpus linguistics. The countries which most productive in Forensic Linguistics research publication throughout the year based on the network visualization of co-authorship countries are the United Kingdom and the United States which can be seen in the big red nodes. The most productive countries to cite the forensic linguistics research articles, books, and proceedings are United Kingdom, Poland, and Russian federation as shown in the Network visualization of countries citation.*

KEYWORDS-*Forensic Linguistics, Bibliometric Analysis, Vosviewer, Scopus Database.*

I. INTRODUCTION

Scopus is a citation and abstract database launched in 2004 but covers records of previous years dating as far as 1950. The database is provided and managed by Elsevier and currently holds over 70 million records of peer reviewed articles, reviews, notes, editorials, survey, book and book chapters, monographs, patents and conference proceedings of publishers of all academic domains. Scopus uses four quality assessment measures to rank and determine the impact of journals indexed in it. These include: h-index, Citescore, SJR (SCImago Journal Rank) and SNIP (Source Normalized Impact per Paper)(Okagbue et al., 2018). Scopus is recognized as the largest abstract and citation database of peer-reviewed literature covering a wide range of subjects. Thus, using Scopus is an attempt to cover more topics which may not be available in WoS(Md Khudzari et al., 2018).

Bibliometric analysis is used to understand the global research trends in a specific area based on the outputs of the academic literature database. Bibliometrics is the cross-disciplinary science of quantitative analysis of all knowledge carriers by mathematical and statistical methods (Merigó, 2016). Bibliometric indicators such as total publications, total citations, CiteScore, and h-index were used for ranking purposes(Md Khudzari et al., 2018). VOSviewer a software tool for constructing and visualizing bibliometric maps (Md Khudzari et al., 2018).

Forensic linguistics is a branch of applied linguistics relating to the law and legal processes. Forensic linguistics is a relatively new discipline. The creation of forensic linguistics as a distinct field within applied linguistics(Perkins & Grant, 2013). According to (Olsson, 2008), Forensic Linguistics is the interface between

language, crime and law, where law includes law enforcement, judicial matters, legislation, disputes or proceedings in law, and even disputes which only potentially involve some infraction of the law or some necessity to seek a legal remedy.

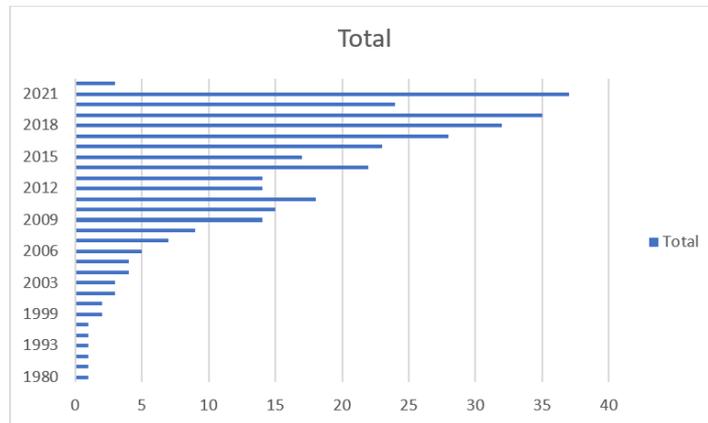


Chart 1. Total publication of Forensic Linguistics from 1980 to 2021

Today forensic linguistics is a widely recognized field (Perkins & Grant, 2013). The total publication of Forensic Linguistics from 1980 to 2020 increased significantly, although in certain years it decreased and increased in the following year (chart 1). Forensic linguistic publications from 1980 to 1998 only amounted to 1 publication per year while forensic linguistic publications in 2020 amounted to 37 publications. However, it is very unfortunate that in 2021, forensic linguistic publications have decreased drastically by only 3 publications even though the publication of forensic linguistic disciplines is very likely to be published annually with various cases in each analysis.

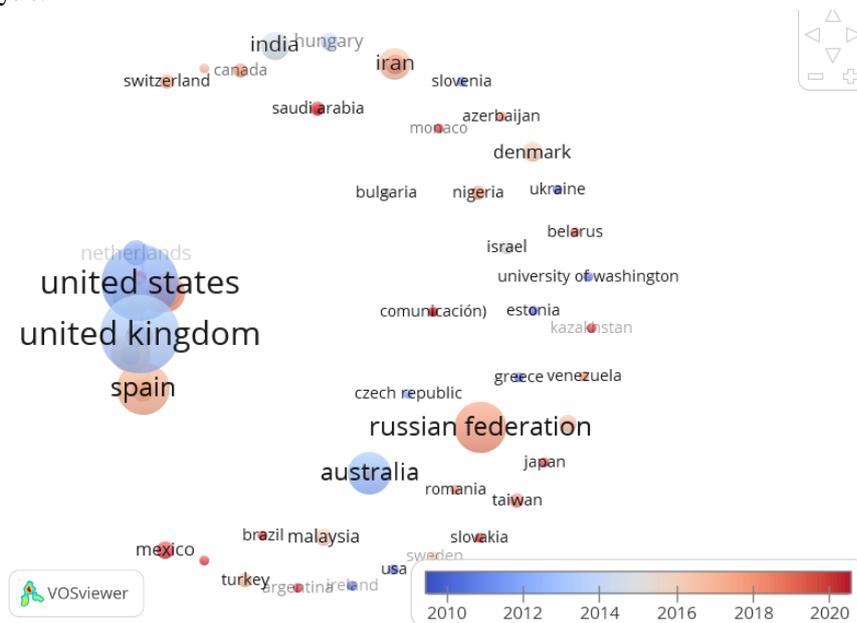


Figure 1. Network visualization of countries co-authorship

Likewise, with the following countries (figure 1), the United Kingdom and the United States are the two countries with the largest forensic linguistic publications compared to 64 other countries. However, based on the network visualization of co-authorship countries, it shows that the forensic linguistic publications from the two countries were from 2010 to 2014 (see blue nodes) while the country with the smallest forensic linguistic publication was in 2020 to date (see red nodes). The network visualization of countries co-authorship above is

set with a minimum number of documents of a country are 1 of the 66 countries, 66 meet the thresholds with 46 clusters.

Based on the description above, the formulation of the problem in this study is:

1. Which author's organizations publish the most Forensic Linguistics research throughout the year?
2. What have been the most frequently explored topics in Forensic Linguistics research throughout the year?
3. Which publications (including journal articles, proceedings, books, and book chapters) and organization have been most highly cited in Forensic Linguistics research throughout the year?
4. Which countries have been most productive in Forensic Linguistics research publication throughout the year?

II. METHOD

This study of Forensic Linguistics applied the Bibliometric analysis. This kind of approach distinguishes its analysis paper from a review paper which primarily intended to discuss the latest progress, challenges, and future directions of a certain topic (Md Khudzari et al., 2018). Therefore, the data involve in this study is secondary data. The data gathered are from the Scopus database. The Scopus is considered to be used due to it presents the whole research article about Forensic Linguistics which are published in all of countries. Other than that, the Scopus database are a huge database of research articles publication. By using Vosviewer 1.6.18 software, the 341 articles were extracted from www.scopus.com are explored which consist of several type of document (see chart 2) on February, 16 2022. Vosviewer is developed by Nees Jan Van Eck and Ludo Waltman. Vosviewer is supported by the Centre for Science and Technology Studies of Leiden University. Vosviewer is a tool of data collection which present among of them are co-authorship, co-occurrence, citation, bibliographic coupling, and co-citation which are appropriate to identify the research aims of this study. The keywords used are "Forensic Linguistics" OR "Legal Linguistics". Research articles found based on the keywords are from 1980 to 2022. Apart from Vosviewer, Tableau Public is used to visualize the data.

III. RESEARCH RESULT AND DISCUSSION

The most author's organizations published Forensic Linguistics from 1980 to 2022

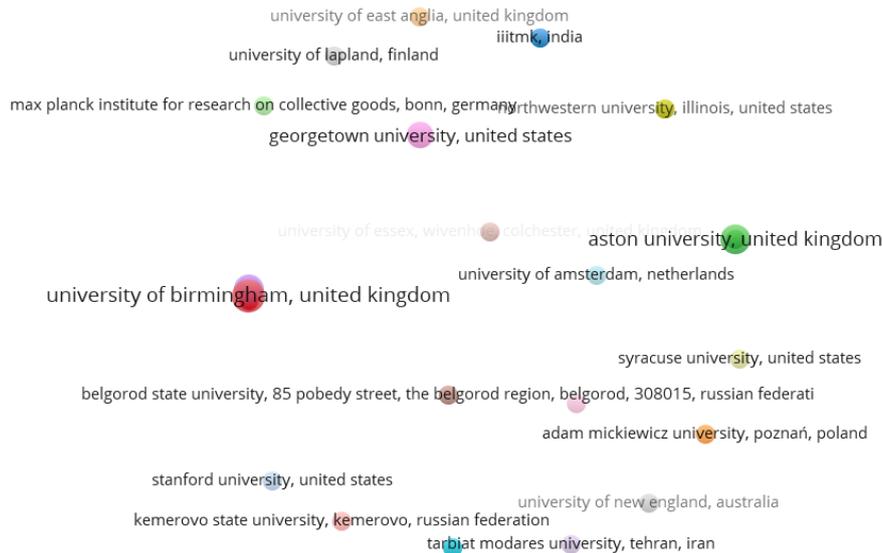
Organizations (affiliates) contribute greatly to any publication on Scopus one of them. In table 1, it can be seen that the most author's organizations published Forensic Linguistics research are the University of Birmingham, United Kingdom, Georgetown University, United States, and Aston University, United Kingdom with the frequency of documents that are not much different.

Table 1. The most author's organizations published Forensic Linguistics research

Organization	Frequency
University of Birmingham, United Kingdom	4
Georgetown University, United States	4
Aston University, United Kingdom	3
University of New England, Australia	2
University of Essex, Wivenhoe, Colchester, United Kingdom	2
Rochester Institute of Technology, New York, United States; Northwestern University, Illinois, United States	2
Kemerovo State University, Kemerovo, Russian Federation	2
LBS Center for Science and Technology, India; IIITMK, India	2
University of East Anglia, United Kingdom	2
School of Languages and Social Sciences, Aston University, United Kingdom; School of English, University of Leeds, United Kingdom	2
Syracuse University, United States	2

Stanford University, United States	2
Adam Mickiewicz University, Poznań, Poland	2

Figure 2. Network visualization of organization co-authorship

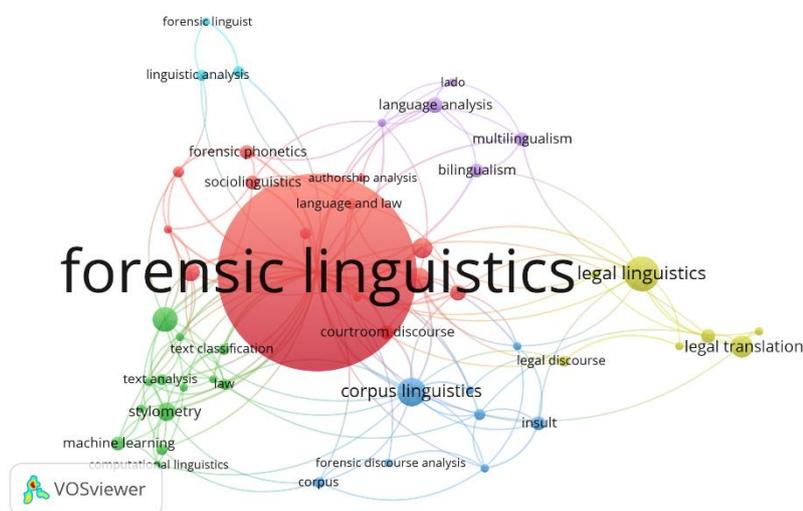


In addition to table 1 above, the most author's organizations published Forensic Linguistics research can be seen in figure 2 where the largest node is the organization with the most forensic linguistic publications such as University of Birmingham United Kingdom, Georgetown University United States, and Aston University United Kingdom. The network visualization of countries co-authorship above is set with a Minimum number of documents of an organization are 2 of the 428 organization, 27 meet the thresholds with 20 clusters.

The most frequently explored topics in Forensic Linguistics research from 1980 to 2022

In order to understand the global research trends in a specific area based on the outputs of the academic literature database is used Bibliometric analysis (Md Khudzari et al., 2018). The most frequently explored topics in Forensic Linguistics research from 1980 to 2022 can be seen in figure 3 in this following.

Figure 3. Network visualization of co-occurrence



The keyword used in this research article is forensic linguistics. As can be seen from the network visualization of co-occurrence (figure 3), legal linguistics and corpus linguistics are the most frequently explored topics in Forensic Linguistics. Research on the topic of forensic linguist, forensic discourse analysis, legal discourse and so on is still little researched. Thus, the trend topics to be researched in forensic linguistics are those topics which are still little researched.

A study shows that Web of Science is a great database than Scopus. According (Md Khudzari et al., 2018), the search results from Web of Science, for instance, display automatically the most popular articles in the field by a feature known as 'hot paper', a feature that is still lacking in Scopus. Based on this recent study found that the Scopus have that feature also. Therefore, WoS and Scopus have a similar great database.

The most highly publications cited in Forensic Linguistics research from 1980 to 2022

Chart 3 and figure 4 below show the most highly publications cited in Forensic Linguistics research from 1980 to 2022. First, chart 1 shows that there were 179 publications of forensic linguistics documents in the International Journal of Speech, Language, and Law, followed by Applied Linguistics as many as 176 publication documents, and several other journals as shown in the chart.

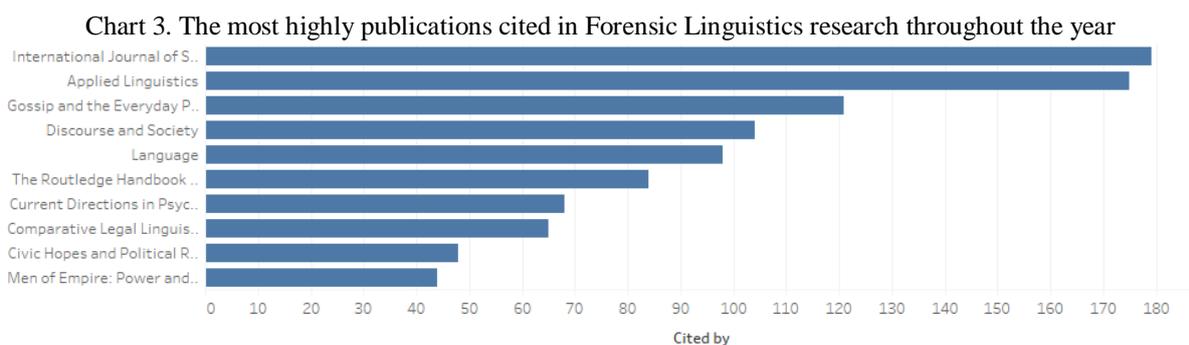
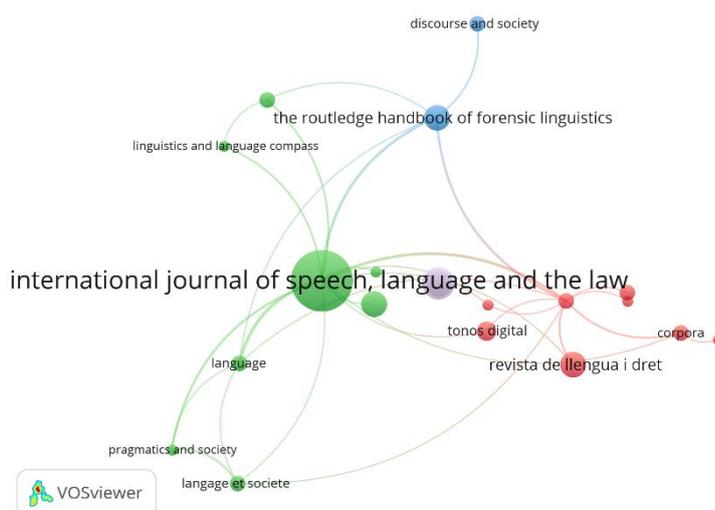


Figure 4. Network visualization of source citation



In the network visualization of source citation (figure 4), it can be seen that the source of language et society and several other sources or publications are the lowest citations of forensic linguistic publications. In contrast to the International Journal of Speech, Language, and Law and several other publications that have the highest citations.

Other fact reveal that GS actually found the most citations, including most of the citations found by WoS and Scopus (Martín-Martín et al., 2018) as shown in the following table.

Table 2. Comparison citations among GS, WoS, Scopus

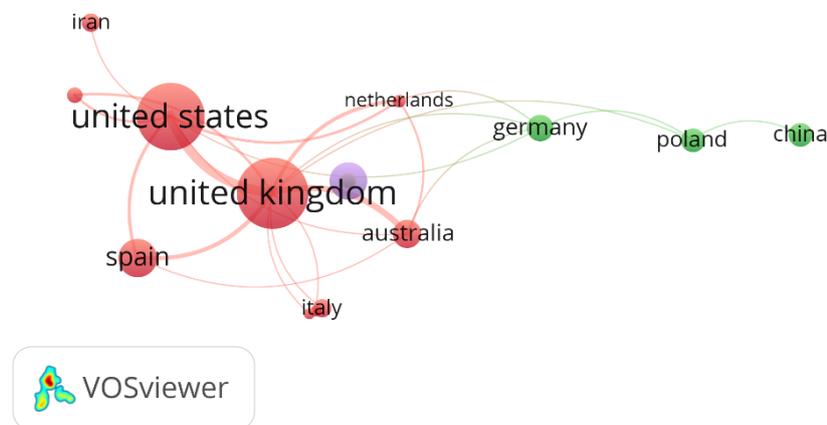
	% GS (all cit.)	% WoS (all cit.)	% Scopus (all cit.)	% WoS cit. in GS	% Scopus cit. in GS	% WoS cit. in Scopus
Overall	94	52	60	95	92	93
Humanities, Literature & Arts	93	27	36	88	84	83
Social Sciences	94	35	43	93	89	89
Business, Economics & Management	96	28	35	93	92	89
Engineering & Computer Science	93	52	63	94	90	94
Physics & Mathematics	96	59	64	97	94	94
Health & Medical Sciences	94	54	62	95	91	93
Life Sciences & Earth Sciences	95	62	67	96	93	95
Chemical & Material Sciences	94	73	77	95	94	96

(Martín-Martín et al., 2018)

The most productive countries in Forensic Linguistics research publication from 1980 to 2022

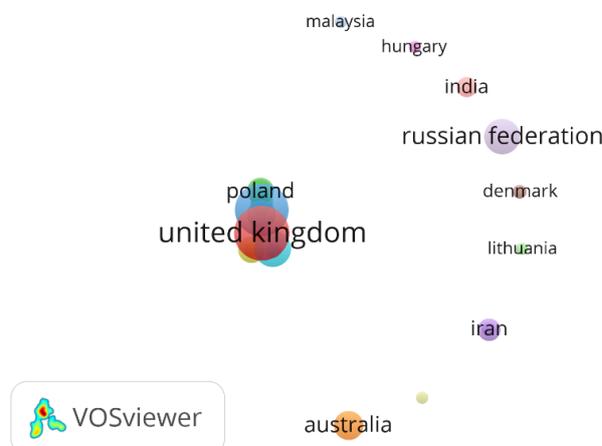
Even the bibliometric method considered only one database namely Scopus (Okagbue et al., 2018) but it can reveal the most productive countries in Forensic Linguistics research publication. The network visualization of co-authorship countries (figure 5) below shows that the most productive countries to publish forensic linguistics are the United Kingdom and the United States which can be seen in the big red nodes. Meanwhile, countries that are less productive to publish forensic linguistics are the Netherlands, Iran, and China.

Figure 5. Network visualization of countries co-authorship



The most productive countries to cite the forensic linguistics research articles, books, and proceedings are United Kingdom, Poland, and Russian federation as shown in the Network visualization of countries citation (figure 6) below. Meanwhile, countries that do not cite forensic linguistic publications are Malaysia, Hungary, Lithuania, and Denmark.

Figure 6. Network visualization of countries citation



IV. CONCLUSION

Forensic linguistics as a field is very much still growing and evolving. If viewed as the application of linguistic analysis to forensic texts and contexts it is likely that the need for linguistics in a forensic context will only grow. The author's organizations which publish the most Forensic Linguistics research throughout the year are University of Birmingham United Kingdom, Georgetown University United States, and Aston University United Kingdom. The most frequently explored topics in Forensic Linguistics research throughout the year are legal linguistics and corpus linguistics. Research on the topic of forensic linguist, forensic discourse analysis, legal discourse and so on is still little researched. The publications (including journal articles, proceedings, books, and book chapters) and organization which have been most highly cited in Forensic Linguistics research throughout the year were 179 publications of forensic linguistics documents in the International Journal of Speech, Language, and Law, followed by Applied Linguistics as many as 176 publication documents, and several other journals. The source of language et society and several other sources or publications are the lowest citations of forensic linguistic publications. In contrast to the International Journal of Speech, Language, and Law and several other publications that have the highest citations. The countries which most productive in Forensic Linguistics research publication throughout the year based on the network visualization of co-authorship countries are the United Kingdom and the United States which can be seen in the big red nodes. Meanwhile, countries that are less productive to publish forensic linguistics are the Netherlands, Iran, and China. The most productive countries to cite the forensic linguistics research articles, books, and proceedings are United Kingdom, Poland, and Russian federation as shown in the Network visualization of countries citation. Meanwhile, countries that do not cite forensic linguistic publications are Malaysia, Hungary, Lithuania, and Denmark.

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