

## Pedagogical Stylistic Research: A Bibliometric Analysis using Vosviewer and Biblioshiny R From 2013-2023

**Arina Dienana**

Corresponding Authors' Email: [dienanaarina26@upi.edu](mailto:dienanaarina26@upi.edu)

Universitas Pendidikan Indonesia, Indonesia

**Ana Sabila Rizqia**

Email: [anasabila29@upi.edu](mailto:anasabila29@upi.edu)

Universitas Pendidikan Indonesia, Indonesia

**Asep Sopian**

Email: [asepsopian@upi.edu](mailto:asepsopian@upi.edu)

Universitas Pendidikan Indonesia, Indonesia

**Muhammad Yahya Abdullah**

Email: [yahyaabdullahpalembang@gmail.com](mailto:yahyaabdullahpalembang@gmail.com)

Universitas Islam Negeri Raden Fatah, Indonesia

### Abstract

*The aims of this research is to find out the dynamics relevant to pedagogical stylistic over period of ten years from 2013 until 2023 by analyzing research trends, citation trends, gap research and countries that have cooperative relations on pedagogical stylistic topic. Furthermore, the research method used bibliometric visualization and bibliometric analysis. Research data were extracted from a scopus database then analyzed with VosViewers applications and Biblioshiny R as data analysis software. The research stages included identification, eligibility assessment and inclusion screening which resulted in final data of 97 publications. The result indicates a rise in publications concern to pedagogical stylistic has increased, particularly in 2022. Publications from 2016 have the highest g-index and h-index scores among all years, with 76 citations, the citation trend for pedagogical stylistic happened in 2016. Russian, United Kingdom and United State become a country that have significant influence of this research. The most popular keyword was student, professional aspects, pedagogical stylistic and stylistic analysis.*

**Keywords:** Pedagogical stylistic, Bibliometric, Scopus, Research Trends.

### INTRODUCTION

Stylistics is the study of style. Style is a unique way of expressing something to make the message clear and effective. Style can also be understood as a way of using language (Pradopo, 2021). Language style is a person's unique way of expressing their thoughts through language, showing the author's character and personality. Using language style to make the thoughts reflect

the author's soul and personality. Language style includes word choice, sentence structure, use of figures of speech, imagery, and rhyme (Sopian, 2017).

Stylistics is the study of how language is used in literature. In stylistics, one can focus on style elements such as syntax, phonology, vocabulary, meaning, and visual presentation of text (Leech & Short, 2007). The latest study by Fogal (2015) shows several things about stylistics. Stylistics can increase language awareness and be a tool for building academic skills. Additionally, pedagogical stylistics, which involves teaching stylistics in the classroom, is a new trend (Fogal, 2015). Pedagogical stylistics is used to increase student's awareness of the language used in their texts; students are also taught to analyze texts related to phonology, vocabulary, syntax, and clause analysis and study the relationships between sentences and paragraphs (Abdullah, 2021).

Educational practitioners recognize that studying stylistics benefits various learning areas. Stylistics can be used in teaching literature, facilitating literary studies, enhancing linguistic creativity, and supporting literary learning. This argument is made because pedagogical stylistics plays a role in learning. Studies use it to investigate social and cognitive psychology, various topics in psycholinguistics, and the teaching of social and rhetorical skills (Hall, 2014).

Pedagogical stylistics aims to use stylistics in the classroom to help students understand its basic principles. While applied stylistics usually identifies problems in a text and offers solutions, pedagogical stylistics focuses on teaching students to identify and analyze specific linguistic issues in literary and non-literary texts. It also investigates the interactions between students, teachers, and texts. The goal is to encourage students to understand linguistics and appreciate the quality of language (Clark & Zyngier, 2003).

Research in pedagogical stylistics continues to grow as public interest in studying and analyzing stylistics increases. Several previous studies related to stylistics is A Comparative Stylistic Analysis of Anne Hunter's "Winter" and Charles Simic's "Against Winter": Pedagogical Implications for EFL Students (Al-Shboul et al. 2023), This article examines two poems from a stylistic perspective. The new method used in this research is comparative stylistic analysis, which compares the two poems to understand the poet's distinctive style and how linguistic tools convey messages in both poems. The research concludes with important pedagogical implications.

Furthermore, research conducted by Chong (2023) in a conference titled "A Cognitive Stylistic Analysis of K.S. Maniam's In a Far Country" discusses the learning and teaching of K.S. Maniam's In a Far Country to Malaysian students using linguistic analysis. This paper specifically demonstrates how stylistics can be used to explore texts related to the main theme. Stylistic analysis is a popular approach, but few demonstrations of its pedagogy have been given. Therefore, this research pioneers a pedagogical demonstration of stylistics, where students will demonstrate aspects of analysis and how this analysis involves creating meaning (Chong et al., 2023).

Several studies related to pedagogical stylistics can be identified through the presentation of previous research. Many stylistic studies use various data sources, and these themes can be analyzed using bibliometrics. This research is necessary to understand research development in stylistic pedagogy, identify the countries contributing to this topic, and provide information on the most widely discussed studies. This will offer new references for future researchers on the topic of pedagogical stylistic.

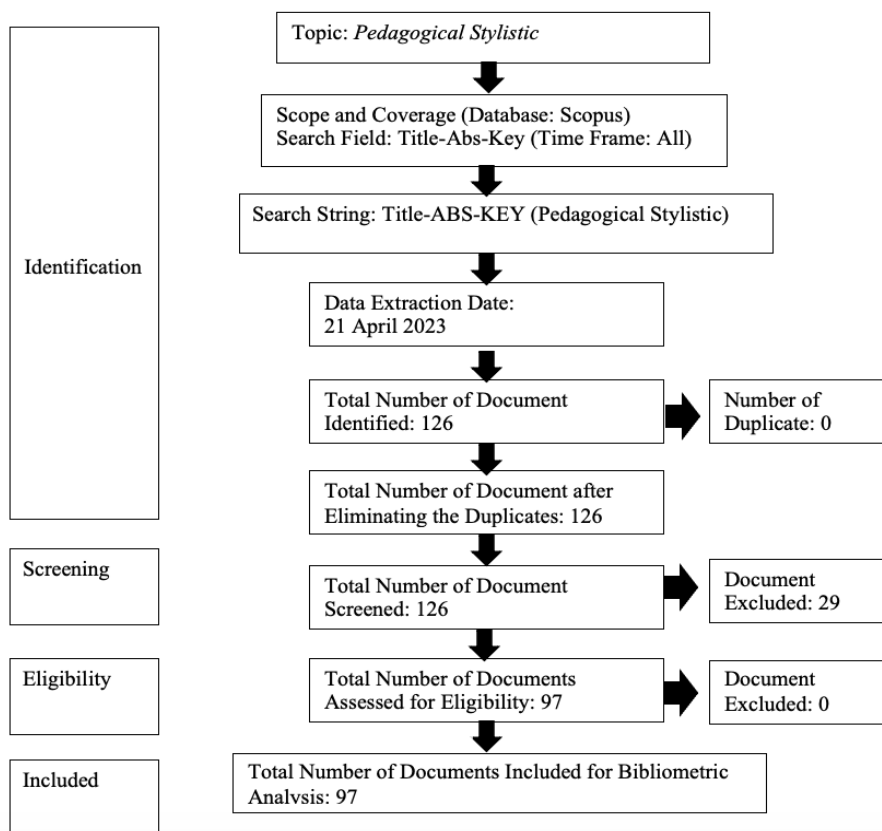
Research on pedagogical stylistics has been conducted over the past few decades. To identify research patterns of authors, journals, countries, and institutions, as well as to observe collaboration patterns between countries and authors, researchers find it necessary to perform a

bibliometric analysis on the topic of pedagogical stylistics. After reviewing previous literature in the Scopus and publish or perish database, it became evident that there is no bibliometric analysis of pedagogical stylistics. Therefore, this research aims to map and provide an overview of a large body of academic literature. The bibliometric analysis uses the Scopus database to identify and determine publication trends over the last ten years (2013-2023) related to pedagogical stylistics.

## METHOD

This research aims to identify publications related to pedagogical stylistics over a 10-year period from 2013 to 2023. The method used in this research is descriptive analysis, which consists of four important steps: identification, screening, eligibility, and inclusion (Moher et al. 2009). The methods used in this research is the bibliometric visualization method and bibliometric analysis. This quantitative method uses a descriptive evaluative approach to represent research trends and characteristics across a series of publications. Bibliometric visualization methods are used to provide a structural overview of a specific research area (Garfield, 2009).

The data sources come from publications on the topic of pedagogical stylistics, with metadata obtained from international journals indexed by Scopus for the period 2013-2023. Scopus is considered one of the most widely used databases for bibliometric analysis. The data collection process is shown in the image below.



**Figure 1.** The data collection process

The researchers began by searching for research related to pedagogical stylistics using the keyword "pedagogical stylistics" in the Scopus database. On April 20, 2024, this initial search yielded 126 articles on this topic, primarily consisting of articles and book chapters. In the second stage, there was a screening process where the researchers reviewed all types of published documents related to this topic. They then selected only the documents written in English to proceed to the next stage. During this screening, researchers filtered the 126 articles, resulting in 97 articles remaining. In the third step, the researcher looked at the title and summary to check if the article was relevant and met the researcher's needs, specifically if it contained topics related to pedagogical stylistics. In this final stage, all 97 articles reviewed met the criteria, so the researchers included them from the previous data collection. After screening, 97 articles were collected and saved in RIS and CSV formats for further analysis and visualization using various applications.

Publication trends in Pedagogical Stylistics will also be analyzed using descriptive analysis from the Scopus database and bibliometric analysis. Research from 2013 to 2023 related to Pedagogical Stylistics will be shown graphically using Microsoft Excel software, displaying the number of publications and average citations per year and the geographical distribution of the data. To calculate the h-index and g-index, each publication will be analyzed using Harzing's Publish or Perish software. The analyzed data, previously processed through the Scopus database, will be visualized using Vosviewer and Biblioshiny R software, including information about authors, countries, institutions, journals, and co-occurrences of author keywords in Pedagogical Stylistics (Van Eck & Waltman, 2010).

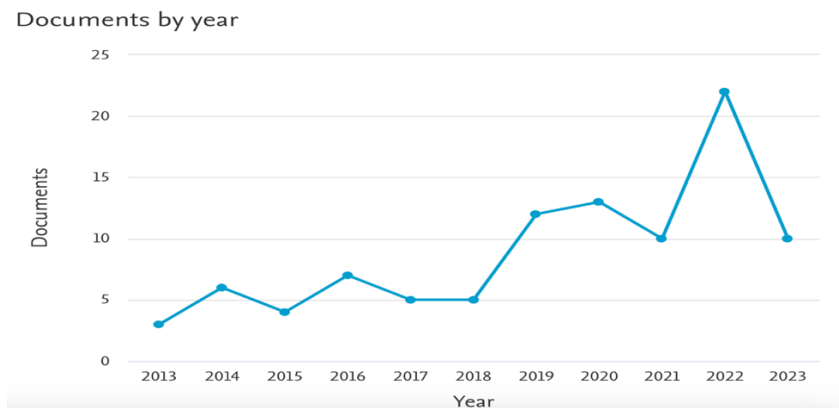
## FINDINGS AND DISCUSSIONS

In the results and discussion section, researchers will analyze trends in the number of publications, citations, research collaboration between countries, and research focus on pedagogical stylistics. The trend in the number of publications will illustrate how scientific publications on pedagogical stylistics have evolved over a decade, specifically from 2013 to 2023. Next, the trend in the number of citations will illustrate how much the research has influenced subsequent studies and become a reference for other researchers. Meanwhile, the trend in research collaboration between countries indicates the degree of cooperation among researchers from different countries worldwide in studying pedagogical stylistics. Such collaboration fosters high-quality research and has a broad impact as it incorporates diverse perspectives and expertise. Lastly, trends in research focus highlight specific areas receiving special attention in pedagogical stylistic studies.

This research used several methods to present bibliometric descriptive analysis data. Researchers began by analyzing publication trends, citation trends, countries and journal distribution, research focus, and research gaps using the biblioshiny R application (Siregar, Sopian, and Naser 2023)

### 1. Publication Trends

The following are publication trends in pedagogical stylistic research for the past 10 years, from 2013 to 2023. A total of 97 publications have been categorized by year of publication and will be presented graphically, as shown in the graphic below:



**Graphic 1.** Number of publications from 2013 to 2023

From the graph above, we can observe that there was an increase in the number of articles from 2018 to 2020. However, there was a decrease in the number of publications from 2020 to 2021. Nevertheless, there was a significant increase in 2022, with a total of 22 publications, making it the year with the highest number of publications. However, in 2023, the number of publications decreased to 10 documents. The largest increase occurred from 2021 to 2022, with 12 publications, while the lowest number of publications was in 2013, with only three publications that year.

**2. Citation Trends**

Table 1 presents citation trends in Pedagogical Stylistics from 2013 to 2023. The 97 publications collected each year will be analyzed based on TP, NCT, TC, H-Index, and G-Index values using the Publish or Perish and Microsoft Excel applications.

**Table 1.** Citation Analysis of publications

Year	TP	NCP	TC	H-Index	G-Index
2023	10	0	0	0	0
2022	22	2	2	1	1
2021	10	6	14	2	3
2020	13	10	25	3	4
2019	12	5	30	3	5
2018	5	4	20	2	4
2017	5	4	19	2	4
2016	7	4	76	3	7
2015	4	4	57	3	4



2014	6	3	37	3	6
2013	3	2	9	2	3

Notes. TP: total of publication, NCP= number of cited publication, TC= total citation, H= h-index, G= g-index.

Table 1 shows that the highest total citations were in 2016, with a total of 76 citations despite only seven publications being published. This indicates that publications from 2016 are the most cited in terms of Pedagogical Stylistics. Additionally, the highest total NCP was in 2020, with an NCP value of 10. It can be concluded that although 2022 had the highest number of publications, namely 22 publications, the highest total citations occurred in 2016. Moreover, Table 1 also indicates that there are no citations related to the topic of Pedagogical Stylistics in 2023.

Additionally, the highest h-index and g-index values were in 2014 and 2016. In 2014, the h-index was three, and the g-index was 6, while in 2016, the h-index was three, and the g-index was 7. In other words, publications from 2014 and 2016 had a significant impact on research in the field of Pedagogical Stylistics. This indicates that these articles received numerous citations from researchers, making a substantial contribution and exerting considerable influence on the topic of Pedagogical Stylistics.

Citation trends for the pedagogical topic of stylistics from 2013 to 2023 are displayed in Table 1, where publications from 2016 received the highest number of citations, 76 times, and had the highest h-index and g-index values, namely h-index 3 and g-index 7. This indicates that publications from 2016 had a significant impact on research related to pedagogical stylistics. Documents published in 2018 are presented in Table 2 below.

**Table 2.** Publications with the highest number of citations

No	Author	Title	Sources	Citation
1	(D. Huron 2016)	Voice leading: The science behind a musical art	The MIT Press	46
2	(C. Griffiths and İnceçay 2016)	Styles and style-stretching: How are they related to successful learning?	Journal of Psycholinguistic Research	of 19
3	(Beaulieu 2016)	Prescriptivism and French L2 instruction	Journal of Multilingual and Multicultural Development	8
4	(Yavgildina et al. 2016)	For the treatment of parenthetical insertions in didactics works on the German language	Beitrage zur Geschichte der Sprachwissenschaft	3

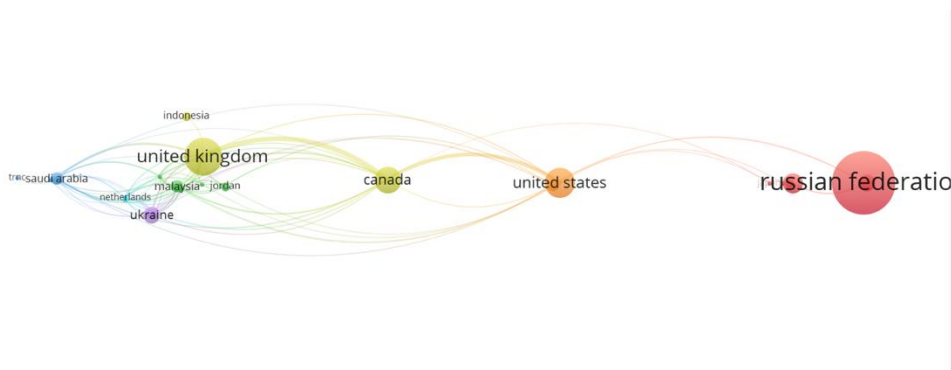
5	(Nikulova and Bobrova 2016)	Online education resources and student needs: Stylistic aspects	Indian Journal of Science and Technology	0
6	(Spitzl-Dupic 2016)	For the treatment of parenthetical insertions in didactics works on the German language	Beitrage zur Geschichte der Sprachwissenschaft	0
7	(Meleshkina et al. 2016)	Methodology of artistic identification on the path of the comprehension of composer's works in a piano class	International Journal of Environmental and Science Education	0

In the table above, the research article titled "Voice leading: The science behind a musical art" by Huron, which provides a cognitive and perceptual explanation of the concept of "voice leading" (David Huron, 2016), has the highest number of citations, with 46 citations in studies related to pedagogical stylistics.

Next, the research article by Griffiths titled "Style and style-stretching: How are they related to successful learning?" was the second most cited document, with 19 citations (Carol Griffiths and İnceçay, 2016). This study found a strong correlation between style-stretching, also known as learning styles, and student learning outcomes. Additionally, it was noted that students with higher scores tended to have a more eclectic learning style, indicating a greater willingness to expand their learning styles. Conversely, students with lower grades tended to have more restricted learning styles. Several other studies listed in Table 2, which also received many citations, have been identified as influential documents in "pedagogical stylistic" studies.

### 3. Geographical Distribution and Relations Between Countries

Figure 2 illustrates the trend of collaboration between countries, highlighting the cooperative relationships in Pedagogical Stylistic research. The threshold for inclusion is a minimum of one document, allowing countries with even a single publication to be displayed in the analysis.



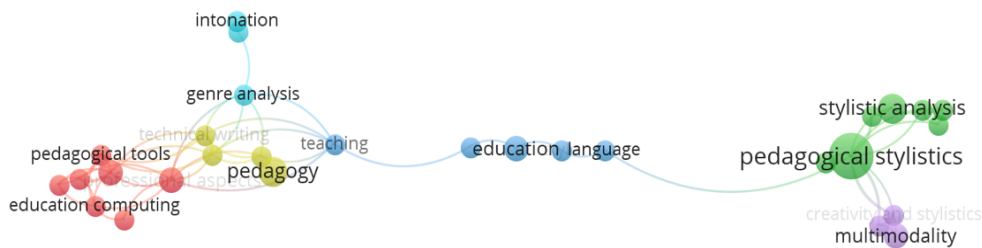
**Figure 2.** Geographical Distribution and Relations Between Countries

There are 41 countries that meet this threshold. Russia has the most documents, with 18 publications. However, Canada has the highest total citations, with 65 citations. The United Kingdom has the second-most documents after Russia, with ten publications.

In the image above, the United Kingdom, United States, and Canada have larger circle diameters compared to other countries. This indicates that these countries have a high level of cooperative relationships with other nations. According to the VosViewer display, the United Kingdom has collaborative relationships with eight countries, the United States with six countries, and Canada with eight countries.

#### 4. Research Focus

The focus of research related to Pedagogical Stylistics from 2013 to 2023 can be seen in figure 3.



**Figure 3.** Keyword visualization with Vosviewer

Researchers set a threshold of at least two publications containing the same keywords. As a result, the 195 keywords were narrowed down to 25. The network visualization in picture 3 shows six clusters with 29 items related to Pedagogical Stylistics. These six clusters are the red cluster, green cluster, dark blue cluster, yellow cluster, purple cluster, and light blue cluster. Among these, the red cluster is the largest, followed by the green and dark blue clusters.

- A. The first cluster (in red) consists of 7 items: educational computing, educational comics, educational process, learning process, pedagogical tools, professional aspects, and student.

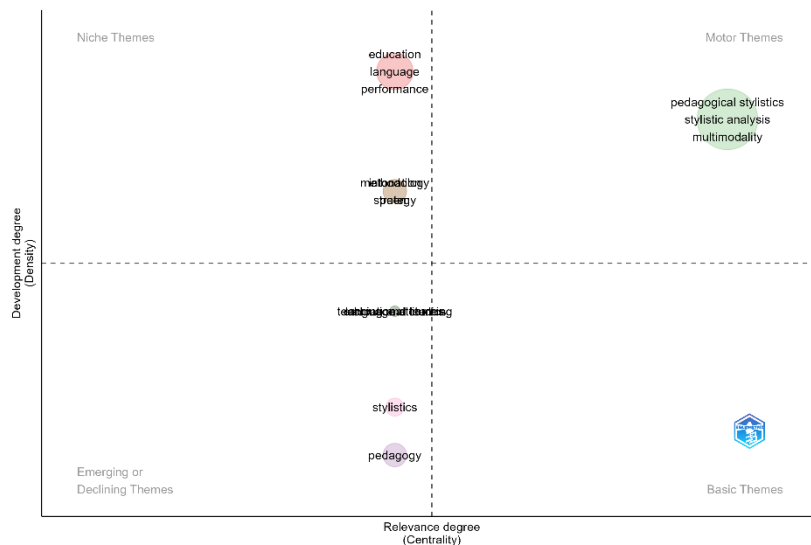


The items with the largest circle diameters in this cluster are "student" and "professional aspects," indicating that these keywords, along with pedagogical stylistics, are the main focus of research related to this topic.

- B. The second cluster (green) consists of 7 items: EFL, literature, pedagogical stylistics, poetic language, reader response, stylistic analysis, and teaching and learning. The item with the largest circle diameter in this cluster is "stylistic analysis," indicating that these keywords, along with pedagogical stylistics, are the primary focus of research in this area.
- C. The third cluster (dark blue) consists of 5 items: education, language, performance, style, and teaching. The items with the largest circle diameters in this cluster are "education" and "teaching."
- D. The fourth cluster (yellow) consists of 4 items, namely literature reviews, pedagogy, quality control, technical writing
- E. The fifth cluster (purple) consists of three items: creativity and stylistics, film poetry, and multimodality.
- F. Cluster 6 (light blue) consists of 3 items, namely genre analysis, intonation, and strategy.

### 5. Research gap

One of the results of the bibliometric analysis is conceptualizing trends exploring future research topics by mapping author keywords using a thematic map, which can be created with the RStudio biblioshiny application (Thangavel and Chandra 2023).



**Figure 4.** Thematic Map with Rstudio (Biblioshiny)

Mapping with this model is represented by a two-dimensional graph divided into four types of quadrants: motor themes, basic themes, emerging or declining themes, and niche themes. These quadrants depict the keywords for each document related to pedagogical stylistic studies. By

observing where each keyword cluster is positioned, we can explain the stage of its evolution (Muñoz-Leiva et al. 2012).

The two-dimensional graph consists of Density lines on the Y-axis and a Centrality line on the X-axis. When a topic approaches the density line, represented by the vertical line on the left, it means that the author has extensively written and studied the topic, as indicated by the increased use of keywords. However, when a topic approaches the centrality line, represented by the horizontal line at the bottom, it suggests that the topic has a notable impact on the advancement of "pedagogical stylistics."

In the niche theme quadrant, there are two clusters near the density line: the red cluster (education, language, performance, and style) and the brown cluster (methodology, poetry, intonation, and strategy). This suggests that authors have extensively published on this topic in documents related to "pedagogical stylistics." However, these keywords are far from the centrality line, indicating that they do not significantly influence the development of the topic "pedagogical stylistics."

In the motor themes quadrant located at the top right, there is one cluster in green consisting of several keywords (pedagogical stylistic, stylistic analysis, multimodality, creativity, stylistic, EFL, film poetry, literature, poetic language, reader response). It can be inferred that the topics in this quadrant have been extensively discussed in documents related to "pedagogical stylistics" and have also had a significant impact on the development of the study.

Next, in the emerging or declining themes quadrant, we find the dark green cluster consisting of the keywords "teaching and learning" and "language attitudes." The pink cluster includes the keyword "stylistic," and the purple cluster consists of the keyword "pedagogy." These keywords are presumed to represent topics that are either emerging or declining in relevance within the study of "pedagogical stylistics," as this quadrant is positioned far from both the density line and the centrality line.

No keyword clusters were found in the last quadrant, namely, basic themes located at the bottom right. If there are keywords in this quadrant, they are identified as topics that have a significant impact on the development of pedagogical stylistic research. However, these topics are still infrequently researched by academics due to the low frequency of these words in documents related to the research topic "pedagogical stylistic."

By mapping the thematic map visualized in Figure 5, we can conclude that all clusters located in the niche and motor themes quadrant represent trending research topics. Meanwhile, topics found in the emerging or declining themes and basic themes quadrant represent potential research gaps in the future. These topics require further development by researchers in the field of "pedagogical stylistics."

## CONCLUSION

This research used data analysis to examine pedagogical stylistics for ten years. It confirms that the topic of stylistics has become very dynamic since 2019. Several articles in the pedagogical stylistics and stylistic analysis have the potential to enhance scientific studies in this area. Several topics and keywords used in this field have the potential to be further developed, making them valuable for future written works.

This research contributes to mapping publication trends among researchers and enthusiasts in the field of pedagogical stylistics, serving as a guide for other researchers to identify research

gaps. Overall, studies on pedagogical stylistics play a crucial role in utilizing stylistics in classrooms and enhancing student's grasp of its fundamental principles. This is fundamental for the ongoing advancement and future development of stylistics.

## REFERENCES

- Abdullah, kameran N. (2021). A Pedagogical Stylistic Study of “Eleven” by Sandra Cisneros. *Cihan University-Erbil Journal of Humanities and Social Sciences*, 5(1), Article 1. <https://doi.org/10.24086/cuejhss.v5n1y2021.p.63-66>
- Al-Shboul, O. K., Al-Khawaldeh, N. N., Hamdan, H. J., & Al-Khawaldeh, S. (2023). A Comparative Stylistic Analysis of Anne Hunter's ‘Winter’ and Charles Simic's ‘Against Winter’: Pedagogical Implications for EFL Students. *Eurasian Journal of Applied Linguistics*, 9(3), 63–72. Scopus. <https://doi.org/10.32601/ejal.903006>
- Beaulieu, S. (2016). Prescriptivism and French L2 instruction. *Journal of Multilingual and Multicultural Development*, 37(3), 274–285. Scopus. <https://doi.org/10.1080/01434632.2015.1068786>
- Chong, S. T., Rahman, A. Z. A., Kaman, Z. K., & Leon, C. (2023). A cognitive stylistic analysis of K.S. Maniam's in a far country. In Meen T.-H. & Chang C.-Y. (Eds.), *AIP Conf. Proc.* (Vol. 2685). American Institute of Physics Inc.; Scopus. <https://doi.org/10.1063/5.0111740>
- Clark, U., & Zyngier, S. (2003). Towards a pedagogical stylistics. *Language and Literature*, 12(4), 339–351.
- Fogal, G. G. (2015). Pedagogical stylistics in multiple foreign language and second language contexts: A synthesis of empirical research. *Language and Literature*, 24(1), 54–72. Scopus. <https://doi.org/10.1177/0963947014555450>
- Garfield, E. (2009). From the science of science to Scientometrics visualizing the history of science with HistCite software. *Journal of Informetrics*, 3(3), 173–179.
- Griffiths, C., & İnceçay, G. (2016a). Styles and style-stretching: How are they related to successful learning? *Journal of Psycholinguistic Research*, 45(3), 599–613. Scopus. <https://doi.org/10.1007/s10936-015-9366-2>
- Griffiths, C., & İnceçay, G. (2016b). Styles and Style-Stretching: How are They Related to Successful Learning? *Journal of Psycholinguistic Research*, 45(3), 599–613. <https://doi.org/10.1007/s10936-015-9366-2>
- Hall, G. (2014). *Pedagogical stylistics*. London: Routledge.
- Huron, D. (2016). Voice leading: The science behind a musical art. In *Voice Lead.: The Sci. Behind a Music. Art* (p. 263). The MIT Press; Scopus. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85010338916&partnerID=40&md5=4c8c73d228d3b7316e48f37e6fb65a8f>
- Leech, G. N., & Short, M. (2007). *Style in fiction: A linguistic introduction to English fictional prose* (Issue 13). Pearson Education.
- Meleshkina, E. A., Scherbakova, A. I., Korsakova, I. A., Slavina, E. V., & Kazakova, I. S. (2016). Methodology of artistic identification on the path of the comprehension of composer's works in a piano class. *International Journal of Environmental and Science Education*, 11(8), 1701–1710. Scopus. <https://doi.org/10.12973/ijese.2016.547a>

- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group\*, t. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Annals of Internal Medicine*, 151(4), 264–269.
- Muñoz-Leiva, F., Viedma-del-Jesús, M. I., Sánchez-Fernández, J., & López-Herrera, A. G. (2012). An application of co-word analysis and bibliometric maps for detecting the most highlighting themes in the consumer behaviour research from a longitudinal perspective. *Quality & Quantity*, 46(4), 1077–1095. <https://doi.org/10.1007/s11135-011-9565-3>
- Nikulova, G. A., & Bobrova, L. N. (2016). Online education resources and student needs: Stylistic aspects. *Indian Journal of Science and Technology*, 9(42). Scopus. <https://doi.org/10.17485/ijst/2016/v9i42/104279>
- Pradopo, R. D. (2021). *Stilistika*. Yogyakarta: UGM PRESS.
- Siregar, S. D. P., Sopian, A., & Naser, A. D. M. (2023). The Research Trends in Grammatical Arabic in the Arabic Language: A Bibliometric Review (1981-2023). *Nady Al-Adab: Jurnal Bahasa Arab*, 20(2), 1–17.
- Sopian, A. (2017). Stilistika dialog qur’ani dalam kisah nabi Nuh as. *Bahasa Dan Seni: Jurnal Bahasa, Sastra, Seni, Dan Pengajarannya*, 45(2), 181–196.
- Spitzl-Dupic, F. (2016). For the treatment of parenthetical insertions in didactics works on the German language. *Beitrage Zur Geschichte Der Sprachwissenschaft*, 26(1), 83–106. Scopus.
- Thangavel, P., & Chandra, B. (2023). Two Decades of M-Commerce Consumer Research: A Bibliometric Analysis Using R Biblioshiny. *Sustainability*, 15(15), Article 15. <https://doi.org/10.3390/su151511835>
- Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.
- Yavgildina, Z. M., Murtazina, G. R., Salikhova, L. I., Dyganova, E. A., & Kamalova, I. F. (2016). Shaping of a musical culture of youth in a small town. *Global Media Journal*, 2016, 1–8. Scopus.