

## Writing Ability with Metaphorming Approach: A Systematic Review

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### Abstract

Metaphorming is a new way of brainstorming that covers all aspects and complexity of students' creative thinking skills. This approach enhances fast-thinking ability and creativity, allowing them to connect something that is known with a new one for better problem-solving. The purpose of this study was to conduct a systematic review on how to improve students' writing skills through a metaphorming approach. The methodology used was the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA). Furthermore, the writing skills were examined using a metaphorming approach from 5 databases with several articles, including 143, 58, 4, 198, and 23 from Microsoft Academic, Scopus, JSTOR, crossref, and EBSCO, respectively. This study's results analyzed 11 focus studies related to metaphorming effects. The study strategy was developed by formulating the problem, combining descriptors and keywords, and the year of publication. To choose the correct studies for review, three independent reviewers carried out abstract and full-text selection and research analysis. In this regard, 426 articles were obtained, though only 43 were selected for review. The results showed that mapping the metaphorming approach could improve writing skills. Therefore, this study provides valuable information about the metaphorming approach for better writing skills and can also be used to examine learning and teaching materials development.

**Keywords:** *Metaphorming approach; PRISMA; Systematic literature review; Writing ability*

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## INTRODUCTION

Writing is a technique that enables humans to express thoughts, what they hear, see, goals, and experiences. It is a form of communication similar to chatting, vital for learning, communicating, and expressing oneself (Erdoğan, 2013). Writing skills can help the reader understand the writer's message and intention for the information not to be obscure (Hajan, Hassan, Hajan, 2019). Furthermore, it is a complex process and one of the most difficult language skills (Zhang, 2013).

Writing involve more than mastering grammar and punctuation because it helps individuals develop dynamic thinking, analytical skills, and the ability to accurately and validly distinguish facts (Zhang, 2013). Writing skills are enhanced by metaphors that correspond to students' thought processes, meeting their motivation and inspiration needs. Metaphors also give students the courage to express ideas easily that would otherwise be difficult to communicate. Therefore, teachers should have an adequate understanding and dig deeper into students' experiences to explain the initial meaning of an expression and ultimately use metaphors that lead them to creativity (Effendi, 2016). Students will improve their writing ability if they follow the teachers' leadings in applying the concept of learning through metaphorming.

Before the conceptual metaphor theory was put forward, people regarded metaphor as a rhetorical device developed in language use. With the growth in

studies, metaphor is now perceived as a way of thinking, commonly used and closely related to language and thoughts (Liu, 2019).

The philosophical basis of conceptual metaphor is based on people's physical and social experiences. Metaphor connects the two conceptual domains between these seemingly unrelated things to help individuals understand new things using associations based on cognitive similarity. It enables people to understand strange and abstract things through familiar and concrete aspects. Through thought and language analysis, metaphors promote understanding and recognition of known things from a new perspective. All language levels, such as words, phrases, sentences, and discourses, are embodied in metaphors for a better understanding of the environment (Koller, 2001).

Metaphorming is the act of changing something from one state to another and altering its meaning. The learning process improves as the brain grows with various parts and cells linking to create meaning. Metaphors enhance learning and writing, helping students transform something from one state to another in terms of material and meaning (Siler, 2010). The term metaphorming originates from the word meta and phora, meaning beyond the real world and to transfer, respectively. Therefore, metaphorming starts with transferring new meanings and associations from an object or idea to another object or idea. Apart from describing thoughts, it entails creativity through brainstorming, taking a one

dimensional representation and turning it into a multidimensional (Siler, 1999). There are four metaphorming processing steps: connection, discovery, creativity, and application (Siler, 2010).

Recent studies have shown how students' ability to learn new languages is linked to their writing skills with metaphorming approach. This has prompted a need for mapping that can help describe the ability to write with a metaphorming approach. This study systematically review previous works and suggest other areas for further analysis (Bettany-Saltikov 2010a, b).

Previous studies on metaphorming provide a new perspective on how students learn languages using metaphors to interconnect their experiences and language. The literature review of this study involves identifying students' experience and their specific representations. The aim was to map writing ability with the metaphorming approach by reviewing and analyzing the current state of study. This is accomplished through a systematic review and providing an overview of the metaphorming approach in writing ability. Additionally, it provides suggestions and directions for further research.

The systematic review uses the following research questions to establish the value of the metaphorming approach on the students' writing ability.

- RQ1. The reported summary of existing literature based on a systematic literature review
- RQ2. The focus of the reported study on the existing literature
- RQ3. The reported research methodologies of previous studies
- RQ4. The reported outcomes in the existing literature
- RQ5. Suggestions on improvement in the review areas.

## METHOD

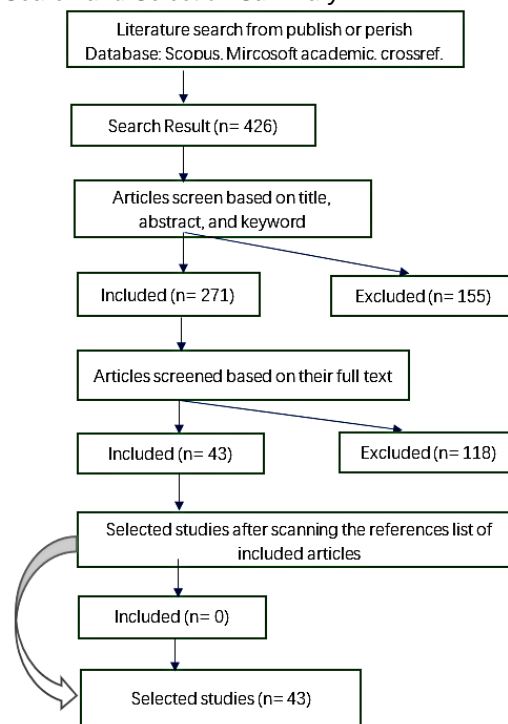
This study was conducted with systematic literature using the PRISMA flow chart (Moher, Liberati, Tetzlaff, 2009). The systematic literature review helps establish what has already been investigated and the existing information gaps that necessitate further examination to advance new knowledge in the field (Tan et al., 2020). Green et al., (2020) suggested that to ensure transparency, the systematic literature review should employ a comprehensive research protocol with the following features: definition of the research question, identifying the keywords and databases, conducting a comprehensive literature search, and apply exclusion and inclusion criteria. It should also entail critically appraising the source quality and studies synthesis. Therefore, this manual consists of a checklist and flowchart (Figure 1) to assist in reporting the review results.

### Search Strategy

Due to the large volume of databases in the search, this study used Microsoft Academic, JSTOR, Scopus, Crossref, and Ebsco databases relevant to the subject area.

The keyword search strategy used in finding the relevant articles was metaphorming and writing ability. However, the study also used Merriam-Webster's Online Thesaurus to identify related terms and synonyms as part of the keywords (see Table 1).

**Figure 1**  
 Search and Selection Summary



**Table 1**  
 Alternative and Synonym Terms for Search

Metaphorming
Metaphor*
(Metaphor, Metaphor, Metaphors, Metaphoric, Metaphorical)
Metaphorical*
(Metaphorical thinking, metaphorical ability)

After establishing the relevant keyword, this study combined some of the words using Boolean operators "AND" and "OR" to acquire search string to extract abstracts from the relevant studies. Combining the terms, we get the following search string which was used to search for abstracts from the relevant studies: ("Metaphor\*" OR & "Metaphorical\*" OR "Metaphorming") AND (writing ability). These keywords were searched in the title and abstract of studies to determine which study was relevant for inclusion.

### Study Selection

This stage involved screening, with the main limiting criteria being the year of publication (2012-2021). The studies and articles used for literature review included scientific journals and proceedings, with the desired results, writing skills and metaphorming. The keyword search result from the abstract and full text was independently carried out to determine what constitutes a literature review. The relevant studies were then imported into the Mendeley desktop

database and, the references were exported to Microsoft Excel, version 2016.

The eligibility stage involved manual filtering of articles and documents through repeated assessment by reading the title and abstract several times to determine any application, problem, intervention, and comparability before they are downloaded as full text.

The next stage is the inclusion, where selected studies were extracted and analyzed to obtain relevant information. Various criteria were used in extracting eligible literature, including author, year of publication, scientific journals, and country of study. The extraction process also involved examining research title, source, inclusion and exclusion criteria, research scope and objectives, system utilization, and research results (Denisse Cartagena-Ramos, 2018).

## RESULTS

A systematic review left 43 studies that perfectly met the selection criteria. This section explains the results from data synthesis and analysis that answer the research questions.

The database search generated 426 studies, but 155 studies were excluded for not being journaling articles upon screening. The remaining 271 studies moved to the next stage, and duplicate entries were also removed. The remaining studies were screened using titles and abstract content, eliminating 166 studies. The full-text screening was then done on the remaining 45 studies, and two were eliminated, meaning only 43 studies were left to be included in the qualitative analysis.

### Study Design Description

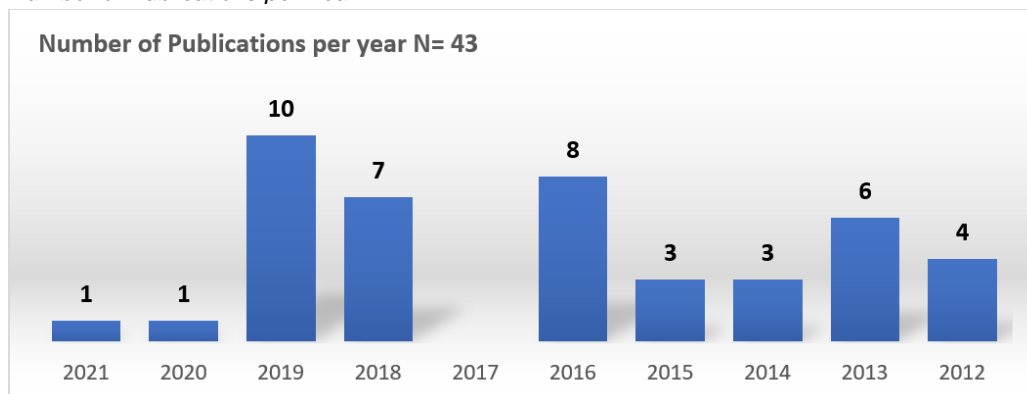
This stage examined the empirical design and analysis details of studies under review, and the one found lacking discarded from the samples. The remaining studies were then carefully reviewed to ensure they have a description, research objectives, methodology, participant demographics, participant selection procedures, analysis, and results.

### RQ1. What is the reported study summary of existing studies being examined based on a systematic literature review?

There were 43 studies included in the literature review published during 2012–2021, with the highest increased witness in 2019. There was no study on this topic in 2107, as shown in Figure 2 below.

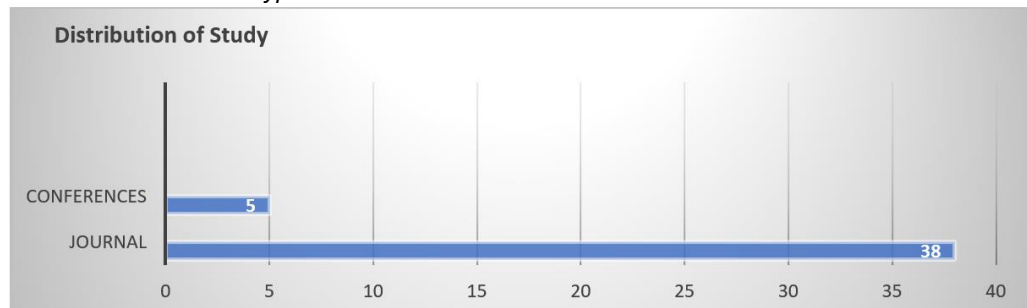
Figures 2

Number of Publications per Year



Figures 3

Distribution of Studies Types



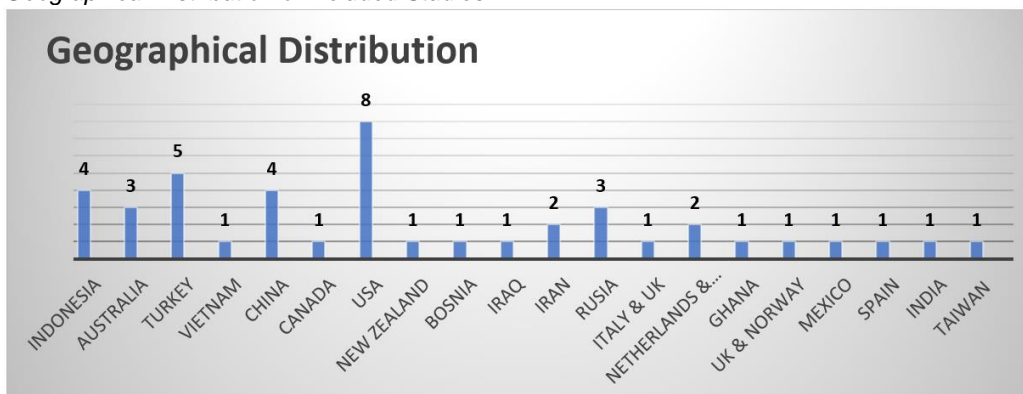
### Geographical Distribution of Selected Studies

This study examines literature published in English with various cultural settings. The most empirical studies reviewed came from the United States, followed by Turkey, as shown in Figure 4.

### RQ2. What do the reported studies included in this study focus on?

The studies mainly focused on investigating writing ability with a metaphorming approach. However, some focused on additional related subjects, as shown in Table 2.

**Figures 4**  
 Geographical Distribution of Included Studies



**Tabel 2**  
 Classification of Study Focus

Study Focus	Description	Frequency	Paper ID
The Effect of Metaphorming	To investigate the effect of metaphorming in writing	7	P1, P18, P19, P21, P24, P27, P28
The Use of Metaphor in writing	To investigate the use of metaphorical words by students in their writing	11	P2, P3, P4, P7, P8, P22, P23, P25, P29, P36, P43
The Use of Metaphor as a cognitive tool	To investigate the use of metaphor as a cognitive tool to understand better thinking, researching, and writing	3	P5, P16, P20
The Use of Metaphor as a cognitive tool	To investigate the types of metaphors used in students writing	7	P6, P10, P11, P12, P13, P15, P26
Students' Perceptions	To investigate how the Students' Perceptions relate to writing through metaphor	2	P9, P14
Teachers' Perceptions	To investigate how the Teachers' Perception relate to writing through metaphor	1	P17
The Use of Metaphor in a public interview	To investigate the types of metaphoric expressions as indicated in Charlie Sheen	1	P37
The Use of Metaphor in Advertisement	To investigate the types of metaphoric expressions in the advertisement	1	P39
Conceptual of Metaphor	To investigate the concept and philosophy of metaphor	8	P30, P31, P32, P33, P34, P35, P38, P42
Technology Implementation	To investigate the implementation of technology with metaphor cards	1	P40
Instructional Design	To investigate the design of the instructional metaphor to assist the student in learning	1	P 41

**RQ3. What are the reported research methods in the included studies?**

Figure 5 below shows that previous studies used several research methods, including qualitative and quantitative methods. A qualitative study employed several data collection methods, such as case studies, interviews, descriptions, and observations. Similarly, the quantitative method relied on experimental studies, surveys, or questionnaires to collect data.

**RQ4. What are the reported outcomes from the examined studies?**

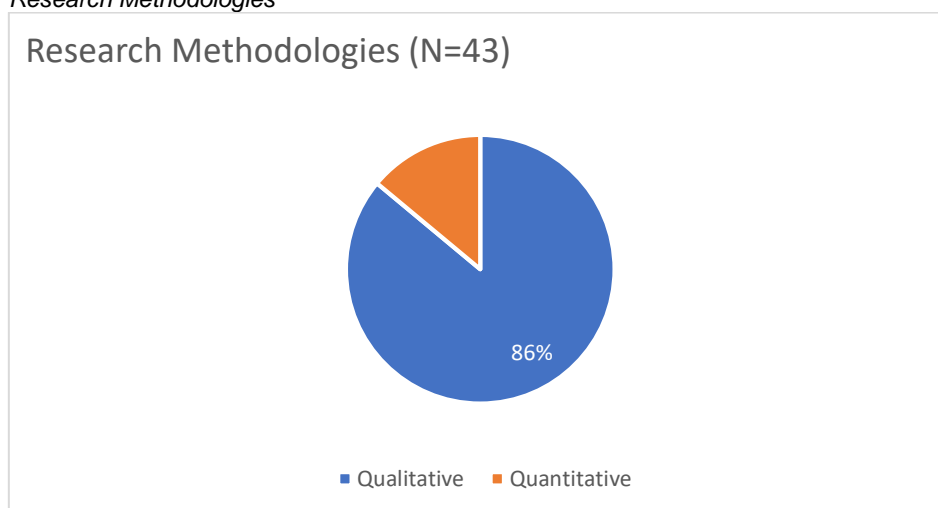
***The Effect of Metaphorming***

Ramli & Boeriswati (2019) suggested the need for lecturers to adapt their teaching methods to meet the students' cognitive needs and improve their essay writing skills. (Effendi, 2016) showed that writing metaphor can provide unexpected information about students' work habits and thought using implicit assumptions on the act of writing and the outcome. (Nabifar, 2016) examined two groups of students and observed that the experimental group performed

much better than the control group, using the descriptive statistics from the independent sample test and the ANCOVA. This finding was in line with the findings of (Nurhasanah & Wikanengsih, 2019), which established a significant value of 0.000005 using a t-test table on the independent samples. The average post-test value also supported the result of these studies in the experiment class of 80.5

compared to the average in the control class of 64. (Fallahpour, 2018) examining Iranian students established a link between EFL learners' creativity and their use of metaphor in descriptive writing tasks at low, mid, and high levels. These findings showed that teachers and content creators have to adapt to using metaphor in helping students.

**Figures 5**  
*Research Methodologies*



Liu (2019) indicated that students using metaphors would better comprehend and regulate their writing at the discourse level, allowing them to present pieces that are cohesive in meaning and more vivid and entertaining. The metaphor will also broaden their horizons and enable them to become more creative. Zhang (2019) also established that students acquainted with metaphoric expressions perform better in enhancing lexical density and removing linguistic errors.

#### ***The Use of Metaphor in Writing***

Hoang & Boers (2018) demonstrated that learners using non-basic words meanings improves their perceived writing skills, as long as they have a good mastery of grammar. Hanić (2020) indicated that participants' personal experiences are linked to the concept of journey, the resulting shared picture, and the journey metaphor, as shown in the intricacy of the writing process.

The data from Littlemore (2014) showed an increase in the general density of the metaphor from CEFR levels A2 to C2. Its findings indicated that most metaphoric expressions at the lower levels are mainly prepositions in closed-classes, but at B2 and higher levels, most metaphoric expressions are open-class.

Lengelle (2014) showed that career writing allows participants to acquire feelings and then make sense of them by finding the "right" words to explain them. Furthermore, Mackie (2017) examined close metaphoric analysis to reveal a deeply embodied view of the participants' writing work, offering methods to focus more on strategic components of grant writing.

Dulger (2019) uncovered some interesting information about student perceptions of EFL writing, with its data exposing some key themes around writing as a process and a product. It revealed 19 themes related to the process and 6 related to writing as a product.

Ahmed & Ahmed (2018) explained that most study samples have a wide range of metaphorical phrases in their work. This assertion aligns with the current study's hypotheses, which claim that metaphors are a global linguistic phenomenon in all languages and are often used by individuals speaking those languages. Utkina (2016) also showed that improving research methods for analyzing metaphor formation in ESAP and gaining knowledge of ESP content and structure is a practical way of improving writing skills. A study by Liardét (2013) enhances the interpretation of the previous performance on lexical density and metaphorical expressions by removing linguistic errors.

Gövenç & Dollar (2016) focused on tacit and unexamined students' and instructors' thoughts and suggested that EFL writing instructors review their teaching methods and styles to discover areas of improvement. Rusdi Noor Rosa & Rudy Sofyan (2017) compiled ten dissertation proposals made by students in the University of Sumatera Utara's Linguistics Doctoral Program. These proposals highlighted the process of using the SFL-based metaphor to improve texts that could enhance the quality of the students' final projects.

#### ***The Use of Metaphor as a Cognitive Tool***

Lockheart & Raein (2012) considered the metaphor rigour's applicability for design research and writing,

offering metaphor suggestions suitable for design and goal achievement. Boyd (2012) reported that metaphor writing could provide unexpected information about the students' work habits and thought processes by clarifying implicit assumptions of the written piece and the outcome. Additionally, Thu (2019) revealed that students who were instructed metaphoric songs had a better understanding of metaphor than those who did not use metaphoric songs.

#### ***The Use of Metaphor as a Cognitive Tool***

Affi (2021) found limited learners' academic writing skills, thus recommended a more explicit pedagogy to help expose the students to grammatical metaphor and implement basic lexicogrammar training with academic works.

Permyakova (2016) examined students' professional ability as portrayed in the conceptual metaphors L2 writing. The study revealed unique areas of convergence and differences. To (2020) suggested that kids with high IQ could use ideational metaphor in persuasive writing in middle primary school, while Wan (2014) showed that instructors could use metaphor-based intervention to help students improve their writing. This could be done in three ways: broadening their conceptions and understandings of various aspects of academic writing, encouraging critical thinking in writing, and advancing positive changes in their beliefs about academic writing. Chen (2013) observed that the students enhanced their use of conventional colloquial terms and innovated analogies that included vivid imagery based on the conceptual metaphors taught in class.

Ryshina-Pankova (2015) used a new approach to complexity in L2 writing, emphasizing the relationship between linguistic complexity and its discourse-semantic role in deriving specific meaning in written texts. Additionally, Gong (2018) argued that grammatical metaphor training could improve the students' English competence by diving deep beyond the surface of language skills to produce skills of native speakers.

#### ***Students' Perceptions***

The data from Erdoğan (2013) indicated that some children viewed writing as a "developing" and "changing" activity, showing that they are aware that their writing skills can improve over a period of time. A study by Aydın (2018) agreed with the descriptive analysis technique that the collected metaphors were categorized according to their similarities and differences and then tabulated using several categories of frequency values for interpretation.

#### ***Teachers' Perceptions***

Dogan (2019) showed that examining metaphor writing can help reveal unexpected information about the student's work habits and thought process by clarifying implicit assumptions of the writing and the outcome.

#### ***The Use of Metaphor in a Public Interview***

Raymond W. & Gibbs, Jr. (2013) conducted public interviews with an American actor, Charlie Sheen,

when the actor seemed to be speaking and acting erratically.

#### ***The Use of Metaphor in Advertisement***

Hidalgo-Downing & Mujic (2013) highlighted the emerging shift in hiding the characteristics of the key metaphors between periods, demonstrating differences in emergent metaphors through time.

#### ***Conceptual of Metaphor***

A study by Genovesi (2020) showed that sometimes a speaker might figuratively speak when they intend to convey more or less predetermined contents. This study showed that the hearer would comprehend what the speaker was saying if they understood its intention. This is because speakers often use figurative speech do not infer or hint at what they mean. It is up to the one hearing to infer meaning. Sanford (2013) examined the experimental approaches in supporting the idea that metaphor is a phenomenon that uses several utterances that can be explained by the interaction of conceptual schemata and syntactic schemata to understand the writing better.

Ansah (2014) focused on the differences in language-specific elaborations as explained by cultural filtering. It examined the broad universal conceptualizations to explain human experiences that are more specific to socio-cultural groups, thus revealing the connection between metaphor and metonymy Lederer (2015) was viewed in this study as a growing corpus of work to help in uncovering the underlying assumptions that organize speakers' understanding of complex topics with political implications. Paola et al. (2020) separate the roles of Alternative Naming and Analogy Perception in the development of metaphor comprehension.

Realı & Arciniegas (2015) indicated that people's behavior is less persistent and prevalent to be produced by social and environmental circumstances. The result of this study was examined in light of conceptual metaphor theory. Minikeeva & Sadykova (2020) cited several European and American metaphor studies, giving findings of their analysis, qualifying for inclusion. Another study also included in the literature review was Lakoff (2014), which provided an overview of the fundamentals of symbolic thoughts and languages from a neurocognition standpoint. It is a multidisciplinary study detailing how conceptual thought and language function in the brain.

#### ***Technology Implementation***

Logler et al. (2018) examined the Metaphor Card toolkit's advantages and limitations. It offered suggestions for how students and instructors could adapt Metaphor Cards to other domains and technologies.

#### ***Instructional Design***

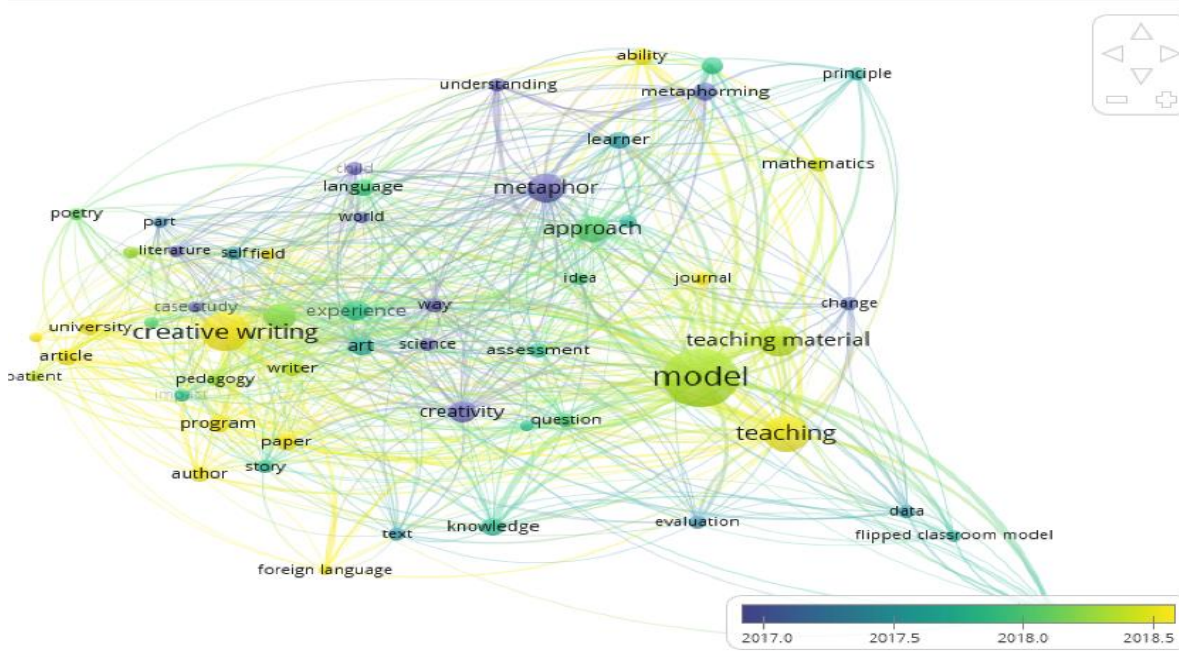
Murtaza (2012) examined how metaphor-analysis can be used when teaching literary work to help students understand that words are not always what they appear to say.

**RQ5. What needs to be done in the areas reviewed?**

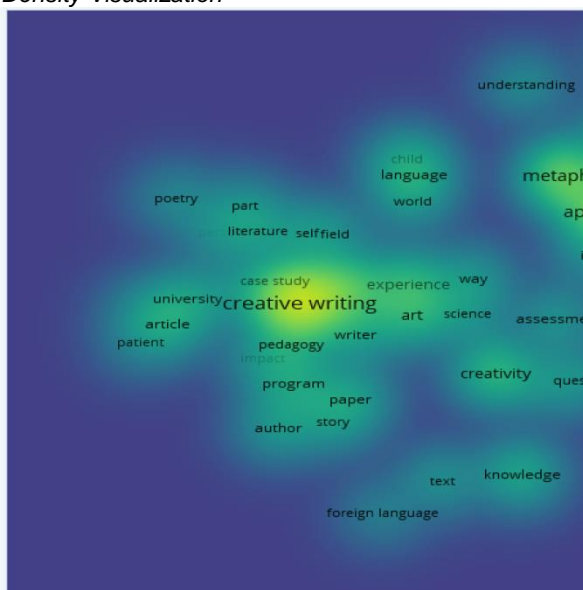
This study used the Vosviewer application to visualize and analyze trends in the bibliometric maps (Van Eck, N. J., & Waltman, 2010), (Ida Hamidah & Sriyono, 2020). The VosViewer provided 4 clusters (red, green, blue, and yellow), showing the link between one topic and another. It also displayed

bibliometric mapping to provide proper visualization. Figures 6 and 7 show that the common keywords were model, teaching, creative writing, metaphor, and approach, though the variables of writing ability and metaphorming still require more study. There are limited studies on teaching materials that implement metaphorming as shown in the pattern of images and colors of the VOSviewer below.

**Figure 6**  
*Visualization Topic Area Using VOSviewer Using Overlay Visualization*



**Figure 7**  
*Visualization Topic Area Using VOSviewer Using Density Visualization*



**FINDING AND DISCUSSION**

The metaphorming learning method explores the natural connections and relationships between

various subjects and knowledge fields. Teachers and instructors are introduced to "metaphorming" to help them in guiding learners to explore these connections and relationships from art to zoology (Jensen, 2008). Metaphorming gives students the freedom to actualize their thinking process rationally. Creativity promoted by metaphorming enables students to pour their ideas and thoughts into writing and use critical and cognitive abilities. Therefore, learning writing skills that focus on the creative thinking process should utilize the students' cognitive styles for better pieces.

The metaphorming learning method also shows how one part is related to another part detected by the students' activate cognitive processes. Siller (2010) and Sunito et al., (2013) emphasized students' ability to connect previous knowledge and experience to create new ones with creative thinking. The connection stages showed that students could use metaphors to connect ideas, knowledge, and experiences, which they can also pour out in their writings. These connections have been pivotal in enhancing students writing skills, producing interesting pieces of literature.

The implementation of the metaphorming approach to enhance students' writing skills is achieved by the application of analogy and metaphorical attitudes (Paola et al., 2020). Learning metaphor can express as a word game so that

students master the art as process of playing with words. The aim of this approach is to help bring out students' creativity through word processing and enhance their ability to imagine with words. This way, the students can explore the depths of literary or non-literary works through language.

Metaphorming is best exhibited in learning to write poetry, allowing students to make analogies from an object. They can make a description of the object being observed using keywords inscribed on the object. For example, an object inscribed with the word "tears" can be interpreted to mean "suffering." Another analogy of this word could be "death," which when expanded, could bring the idea of "corpse" Corpse can also be expanded in an additional analogy to "crying," a process that helps the students enrich their writing and understanding of literature by making a connection between one word and the other.

Creativity and metaphor are two important variables having a significant relationship that can help when learning a foreign language, especially descriptive writing. The student's proficiency in using metaphors in the written language depends on their level of creative thinking processes (Fallahpour, 2018).

## CONCLUSION

This study considered previous studies on how the metaphorming approach impacted writing ability based on PRISMA reporting guidelines. The results showed that 11 studies addressed the effect of metaphorming and metaphor in writing and cognitive tools. These studies also examined the type of metaphor, students' and teachers' perceptions, and metaphor in public interviews and advertisements. Additionally, the concept of metaphor, technology implementation, and instructional design was also examined. The past 9 years have experienced a significant increase in writing ability with the metaphorming approach. The studies reviewed in this study were conducted around the globe in various cultural settings, with the United States dominating the results, followed by Turkey.

A total of 43 studies that met the required criteria were reviewed to establish the impact of with metaphorming approach on writing ability. The 43 studies were published between 2012 and 2021 in 5 databases, including Scopus, crossref, Microsoft academic, JSTOR, and EBSCO, though an additional study is still needed. A wider range of publication sources, such as book chapters, thesis, and articles in journals indexed beyond SSCI journals should be considered.

The study aimed to conduct an in-depth analysis of writing ability with a metaphorming approach. This study demonstrated that writing ability with the metaphorming approach is a relatively new pedagogical approach geared towards helping teachers guide their students to develop unique writing skills.

The studies reviewed in this study went through rigorous selection and data extraction processes to ensure reliability. Two independent coders were used to select and compare the studies, and a discussion

was held using designated markers to determine inclusion or exclusion. Only codes in the agreement were allowed to enter the final code table, while the differences were recorded and discussed until consensus was reached. Moreover, this study was compared with previous systematic reviews to determine possible study inclusion. This approach involved an examination of six large databases, though it may not show all the works in the region. Another qualification was that the studies should be in English.

There is a need for additional study and critical analysis to help resolve any bias in achieving the desired goals. Systematic Literature Review showed that some portion of this study did not achieve its stated goals.

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