

# Metaphor-Themed Studies in Social Studies Education in Turkey and Their Evaluations in Terms of Conceptual Metaphor Theory (CMT)

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## Abstract

The aim of the present study is to examine postgraduate theses and published articles on "analysis of metaphorically used words in discourse" in the field of social studies education in Turkey by document analysis method. Within the scope of the research, The National Thesis Center and Dergipark databases were surveyed. The survey revealed 22 completed theses and 39 published articles between the years of 2010 and 2022. First, the studies were analysed in terms of the study/publication year of the works, the universities where they were conducted, their sample/study groups, the methodological framework they were based on, their data collection tool, the expertise of the researchers and thesis advisors, and the metaphors that were the subject of the research. The works were subsequently evaluated in terms of CMT (Conceptual Metaphor Theory) and were subjected to five research questions. This evaluation revealed that the studies examined: (i) do not establish a relationship between their research findings and the theoretical framework of CMT although they view metaphors as products of conceptual thinking; (ii) do not benefit adequately from the essential references or seminal works of CMT; (iii) do not align themselves with a particular theory of metaphor or an approach, and, therefore, lack criteria for how they associate metaphor with thought; (iv) do not make explicit the criteria according to which they classified the statement of participants as metaphorical; and (v) try to reach the data suited to their research purpose with a data collection tool coded as "A is X like or as B", which is a coding scheme that is conventionally identified as a simile rather than a conceptual metaphor among CMT adherents.

**Keywords:** concept teaching, conceptual metaphor theory, metaphors as a teaching tool, metaphors in teaching, social studies education

**Contribution/Originality:** This research contributes to the existing literature by emphasizing the controversial aspects of metaphor-based research and by offering alternatives to similar research in the future. Research findings can be used reliably in possible meta-analysis studies for metaphor-based research.

## 1. Introduction

Since at least the dawn of history, the nature of natural languages and their central role in the notoriously intertwined triadic relationship between mind, language, and reality have puzzled countless minds. Many philosophers and theorists from Plato and Aristotle to Ferdinand de Saussure and Wilhelm von Humboldt have come up with various explanations on the mechanisms and variables at play in this highly interlaced relationship, laying the foundations of contemporary studies on natural languages (Cameron & Hill, 2017; Çiçekler & Aydın, 2019; Freund, 2017; Kövecses, 2017). At present, most theories on language, regardless of their different fundamental assumptions, recognise natural languages as complex and dynamic systems that develop and change based on the dynamic order and needs of social systems that utilise them. In this context, some of these views go one step further and hypothesise a reciprocal relationship where languages are also able to exert some influence on their speakers, being able to shape their conceptual systems and even perceptions (Başkan, 2006; Evans & Green, 2006).

The current research effort to understand how this mutual interaction works has become an interdisciplinary subject

encompassing psychology, linguistics, neuroscience, anthropology, and philosophy, and has been increasingly driven by experimental approaches. In this regard, cognitive processes and their external manifestations that underlie the abilities of how humans perceive, learn and how they interpret and express the reality outside their first-person experience constitute the main study objects of such studies. Widely considered to be linguistic manifestations of our fundamental cognitive processes such as abstraction, metaphors have consequently attracted in recent years the attention of numerous researchers exploring the relationship between mind and language.

Interestingly enough, view of metaphor as a cognitive process and association of it with our abstraction ability and conceptual systems can be considered to be a relatively novel approach. From ancient Greek thinkers to the 1970s, metaphors used to be widely regarded solely as rhetorical elements primarily used in poetry and literature as ornamental devices (Dancygier, 2017). For this reason, its role and function were simply limited to the domain of rhetorics and were recognised strictly in the contexts where they were utilised by talented poets, writers and orators (Kövecses, 2010; Lakoff & Johnson, 2003).

In this regard, Lakoff and Johnson's seminal work, "Metaphors We Live By" (1980), was the first systematic attempt at overturning this millennia-old view by associating metaphors with our conceptualisation and thought patterns. Their work laid the foundations of Conceptual Metaphor Theory (CMT) and sparked a great interest in the study of metaphors as it spawned numerous CMT-oriented theoretical work (e.g. Lynne Cameron, Evans, Ray Gibbs, Joseph Grady, Zoltán Kövecses, Elena Semino, Gerard Steen, Mark Turner, Nuyts & Pederson) and experimental research that attempt to discover the neural foundations of metaphors (Çiçekler & Aydın, 2019; Evans & Green, 2006). Today, "metaphor and thought" has become one of the central objects of study in psychology, philosophy, linguistics, poetics, history, anthropology, discourse studies, and other disciplines (Verspoor & Spooren, 2010). CMT, as a novel theoretical framework, views metaphor as understanding an abstract conceptual domain in terms of another conceptual domain and aims to understand the human mind based on concepts (Kövecses, 2011). Accordingly, it claims to provide an appropriate theoretical framework where explanations about some of the following phenomena and issues can be proposed (Kövecses, 2017):

- causality of using metaphors,
- the relationship between meaning and degree of abstraction,
- the universality and ubiquity of metaphors,
- the relationship between metaphor and culture,
- creation of novel metaphors.

Further deepening the relationship between metaphor and thought, Lakoff and Johnson (1980; 2003) additionally suggested that thought is fundamentally metaphorical in nature and that humans structure and characterise their perceptions, relationships, and everyday realities in terms of a conceptual-mapping process, the basis of which is constituted by embodied experience. The mapping process is a correspondence between a target domain (A), which is typically an abstract concept to be understood (eg. life, love, social organisations), and a source domain (B). This process, which can be ultimately characterised by the schematic form "A is B" (Evans & Green, 2006) is a founding factor of all manner of cognitive processes (Steen, 2009). Since the use of metaphors at the sub-individual depends on the communicative context, cultural differences, and personal experiences (Cameron, 2003; Kövecses, 2011), the correspondence between two different conceptual domains is typically not an exhaustive but instead a partial one; namely, only certain aspects of the conceptual domains in question are operationalised (Lakoff & Johnson, 1980; 2003). However, Lakoff & Johnson (2003) offer a universal classification of metaphors based on the nature of concepts involved in the mapping and the nature of mapping itself:

- Structural metaphors that are characterised by their rich, structured and systematic mappings between target and source domain
- Ontological metaphors that grant abstract and impalpable concepts a new ontological status,
- Orientational metaphors that employ spatial relationships in relation to human body (eg. up/down, front/back) in the mapping process

## 2. Literature Review

The discovery that metaphors play crucial roles in certain cognitive processes such as making it possible to understand unknown and abstract concepts, increasing memory capacity, facilitating recall and information

transmission (Akyol, 2019; Aubusson, 2006; Aubusson, Harrison & Stephen, 2006; İnan, 2021) has led educational scientists to join the interdisciplinary world of metaphor research in recent years. When we look at studies conducted in Turkey that investigate the use of metaphor in educational contexts, it can be observed that they generally seem to concentrate on revealing the metaphorical perceptions of students, teachers or school administrators on certain issues. While majority of these studies assume CMT as their theoretical framework, they primarily serve diagnostic purposes; namely, they focus on investigating a specific target group in terms of their cognitive and intellectual aspects. Moreover, the studies in question show great similarity in terms of both their methods and the data collection tools they employ. For example, almost all the data collection tools found in these studies are characterised by presenting a concept to the participants and asking them to write the connotations that are generated by the concept in their minds in the form "A is like B" or "A is as much as B" and provide reasons for the analogies. It is undeniable that such studies contribute to the collection of useful data about the conceptual reasoning of the participants. Nevertheless, in order for all studies to follow a standardised method and data collection tool, it is necessary that the theoretical framework, which is CMT in most of the studies in question, underlying the experiments should be based on highly formalised and homogenous foundations.

However, CMT in its current form still lacks rigorous formal foundations and contains dissensus and different approaches due to it being a relatively new framework with an interdisciplinary research community contributing to it. For example, there seems to be an unresolved dispute between scholars who distinguish metaphors and similes by claiming that metaphors do not arise from similarity but from sensory-motor experiences (Kövecses, 2020), and those who regard them as equivalent by claiming that both their function is to realise cross-domain mapping process. Establishing a position in this debate is fundamental in a CMT-driven work as what counts as a "metaphorical expression" strictly depends on how they are defined in relation to each other. For this reason, the obvious expectation is that the studies that are based on CMT clearly state what exactly constitutes an instance of a conceptual metaphor for them while formulating their theoretical frameworks. The lack of a guideline for identifying instances of metaphor makes the reliability of the research results questionable, as there is no definite and formalised criterion for metaphor identification in CMT (Pragglejaz Group, 2007). Therefore, the claim that we can understand a person's cognitive world simply from an analogy he/she has constructed between two concepts lacks theoretical basis or empirical evidence. On the other hand, thanks to corpus research, it is known that many words in our vocabulary are polysemous and metaphors are not the only mechanisms that lead to polysemy. In other words, there are many non-metaphorical occurrences of polysemy in our discourses (Glucksberg, 2003; Pragglejaz Group, 2007). According to Pragglejaz Group (2007) similes are based on explicitly signalled comparisons and their meaning becomes vacuous outside their contexts. Thus, the vast majority of similes marked by such as "like," "as," "as if," or "as though" are not actually metaphorical. Furthermore, most metaphors are not interchangeable with similarities in terms of their functions and meanings, which is an indication that metaphor and simile are not categorically the same thing. For example, when we try to transform the simile "Coffee is like tea" into a metaphor, "Coffee is tea", we lose the original meaning, which is based on an explicit comparison based on similarity (Glucksberg, 2003).

First of all, it is noteworthy that almost all of the studies probing metaphorical perceptions were conducted with methods that fit the definitions of simile, whereas many reputable basic reference sources recognise a difference between metaphor and simile, regarding the use of the words "like" or "as" as the prominent indicators of this distinction. Definitions in several well-known reference sources will help make the situation at hand clear: For example, Encyclopaedia Britannica defines metaphor as creating a new entity that incorporates certain characteristics of two distinct entities, while it defines simile as a comparison between entities signalled by the words "like" or "as" (Britannica, 2017). On the other hand, Longman Dictionary (Longman, 2022) defines metaphor as a way of describing something by referring to the properties of something different. Like Encyclopaedia Britannica, Longman Dictionary (Longman, 2022) makes a distinction between metaphor and simile as well, defining the latter as a comparison of two things that is achieved through the use of words "like" or "as". Likewise, Collins (Collins, 2022) dictionary describes metaphor as defining something by referring to something else different from the defined object, while describing simile as an expression demonstrating the similarity between two things. According to The Cambridge Dictionary of Linguistics (Brown & Miller, 2013), metaphor is a covert comparison of two categories that relates a source domain to a target domain, while simile is a type of metaphor in which the comparison is explicitly signalled. Online Etymology Dictionary (Online Etymology..., 2022) defines metaphor as assigning a characteristic of an object to another object, and simile as a direct and explicit comparison between two different objects. Finally, the American Heritage College Dictionary defines simile not as a type of metaphor, but simply as a figure of speech in which two fundamentally unlike things are explicitly compared, usually by means of "like" or "as" (Israel, Harding, & Tobin, 2004).

The views of CMT theorists, who argue that metaphor and simile constitute different processes, can be framed as follows (Evans & Green, 2006; Glucksberg, 2008; Glucksberg & Haught, 2006; Israel, Harding & Tobin, 2004; Kövecses, 2010; Lakoff & Johnson 1999; Low, 2008, 2017; McGuinness, 2017):

Metaphor	Simile
<ul style="list-style-type: none"> <li>• Metaphor is a conceptual-mapping process that essentially moulds a target domain by utilising the experientially-grounded organisation of a source domain.</li> <li>• Metaphor is a conceptual construction process based on categories.</li> <li>• The possible similarities between a target domain and a source domain are only one of the motivations that make up the metaphor. Moreover, they are not a necessity for the metaphor. Indeed, many ubiquitous metaphors have arisen from the association of different entities with no obvious similarity between them.</li> <li>• In terms of embodied realism, our perceptions of the outside world are limited to our bodily competencies and experience. Thus, the similarity relationships we establish between concepts do not objectively exist. Therefore, metaphor is based on everyday life experience and thought.</li> <li>• The mapping direction in metaphor is one-sided. When the direction of the mapping between the source domain and the target domain is inverted, the referent states of these domains hardly make sense in the new configuration. For example, the conceptual mapping behind the metaphor LOVE IS JOURNEY cannot be symmetric as the hypothetical reversed mapping JOURNEY IS LOVE is not viable.</li> </ul>	<ul style="list-style-type: none"> <li>• Simile is a comparison and generally matches the structures of two different domains.</li> <li>• Simile is a conceptual identification process based on similarities. It can be used in the defining process without resorting to mapping, as it does not add a structure to a concept.</li> <li>• Simile requires objective, explicit and comparable similarities.</li> <li>• Simile is based on the comparison of objective, marked and sensory similarities between two conceptual domains.</li> <li>• Since simile makes an explicit comparison between certain properties of two entities, the comparison relationship between properties can be symmetric and, therefore, can be swapped.</li> </ul>

Utilising metaphors in learning-teaching environments constitutes a method that supports creative thinking and conceptual learning, facilitates understanding of complex and abstract concepts, enables recall of previous learning procedures, increases mental productivity, and enriches expressive power (Akyapı, 2019; Bağcı Çeliksoy, 2019; Canbaba, 2018; Çağlar Karapınar, 2017; Çelik, 2021; Duran, 2018; Kantekin, 2018; Zeytinli, 2021). Metaphors are representations of relational thinking based on social and personal constructs, and, as Aubusson, Harrison and Stephen (2006) state, "thinking without metaphors is like a world without pictures or a colorless". In this context, examining the metaphorical perceptions of selected sample groups about a particular subject or concept can provide useful data about their pre-learning levels, misconceptions, and learning needs (Akyapı, 2019; Bağcı Çeliksoy, 2019; Çelik, 2021; Kılıç, 2010; Tünkler, 2013; Zopoğlu, 2021). This may help create more effective instructional designs, individualize the teaching process, eliminate misconceptions, teach new concepts and gain high-level thinking skills.

According to the CMT, since metaphor is one of the fundamental components of human thought, but not just a product of a literary or a rhetorical skill (Cameron, 2003; Gibbs, 2011; Lakoff & Johnson, 1980), it is involved in specific cognitive processes. In other words, language is secondary and cognitive processes are primary for CMT (Cameron, 2003; Steen, 2009). These processes, which are essentially about mapping certain characteristics or structure of a source domain to a target domain, are considered by most CMT theorists to be completely different from simile, which is based on inter-entity comparisons. While the basic template of a conceptual metaphor is generally coded as A is B in the literature, the encoding of simile is based on the explicit comparison sentences in the form A is like/is as ... as B, which incorporate the words "like" or "as". Hence, as Gibbs (2011) states, "CMT is not a theory of figurative language understanding".

### 3. Methodology

In most of the studies aimed to investigate the metaphorical perceptions in the field of social studies education in Turkey, the data collection tools essentially request the participants to draw a comparison using the words "like" or "as". Is it possible to define a procedure in which a person deliberately tries to establish similarities between entities by making explicit comparisons between them as metaphor? The answer to this question, which is a subject of a broad interdisciplinary effort primarily led by psycholinguistic work, is controversial and is naturally not the subject of the present study. Such idiographic and hermeneutic methods, which do not contain experimental and detailed measurement results, are considered controversial in terms of scientific rigor and objectivity due to their traditional approaches based on pure interpretation and intuition (Kövecses, 2011; Verspoor & Spooren, 2010).

The main purpose of this study is to demonstrate that many studies which base their conceptual framework on CMT have ignored or failed to notice this unsettled debate in CMT. In other words, a significant portion of these studies can actually be classified as simile studies and not metaphor studies for a substantial body of CMT theorists.

Thus, the ultimate implication is that the data obtained from the sample groups may be only revealing about their linguistic expression competence and skills, not their world of thought and attitudes. In light of these observations, the present work aims to generally describe the metaphor-based studies conducted in the field of social studies education in Turkey and to evaluate them in terms of CMT. In the general description section, the study/publication year of the works, the universities where they were conducted, their sample/study groups, the methodological frameworks they were based on, their data collection tools, the expertise of the researchers and thesis advisors, and the metaphors that were the subject of the research were examined. In the evaluation process made in terms of CMT, answers to the following research questions were sought:

- RQ1: Has the CMT been addressed in the theoretical and conceptual framework of the study?
- RQ2: Have the main/seminal references of CMT been used in the research?
- RQ3: Is the research based on a particular metaphor theory or approach?
- RQ4: Is it clearly and explicitly stated in the studies what will be considered as an instance of metaphor?
- RQ5: According to which metaphor coding were the data collection tools prepared?

The present work employed the document analysis technique and the content analysis method, where the written materials are analysed systematically and the data obtained are grouped according to certain criteria. The data obtained from the analyses were subsequently tabulated as frequencies and percentages. The expectation is that the data presented in the present study will shed light on future research by revealing the general trends of the studies, possible methodological shortcomings and the excessive accumulation of research effort on certain points.

An inquiry carried out in the database of the National Thesis Centre revealed that metaphor-based graduate research first started in 1995 and 399 theses on metaphor have been completed to date. Although all the theses are grouped under the umbrella of educational sciences, they seem to have originated in various disciplines such as language education, literature, architecture and fine arts. With 146 theses, however, social sciences constitute the main source of the theses investigating metaphors. Furthermore, only 11 of these theses are doctoral dissertations, with no doctoral-level metaphor-based study within the field of social studies education could be found as of the time of the database inquiry. When it comes to 146 theses in social sciences, only 22 of them focus on social studies education, while the remaining ones concentrate mostly on educational sciences, mathematics and physical sciences. Since there is no doctoral dissertation in the thesis pool of the present research, only "postgraduate theses" are included in the tables presented in the Results section.

An inquiry conducted in the DergiPark database of TÜBİTAK (The Scientific and Technological Research Council of Turkey) revealed 1395 metaphor-based research articles, 245 of which were in the field of educational sciences. The number of metaphor-based articles published in the field of social studies education, which is the subject of the present research, turned out to be 17.

The data obtained from the analyses, along with their tabular presentations, were submitted for review to an educational scientist and a graduate student specialising in the field of computer and instructional technologies in the context of resource studies.

## 4. Results and Discussion

### 4.1 General Results about Studies on Metaphor

In the field of social studies education, an interest in metaphor-based research topics has only recently started to grow, especially in the last five years (Table 1). This finding of the study is supported by other studies that make the same determination about the distribution of metaphor analyzes by years (Koca, Kaya, & Gökçimen, 2020; Sönmez Ektem & Özer Aytakin, 2020). Therefore, metaphor-based research topics can be regarded as a relatively new field of interest for social studies education compared to fields such as science and mathematics education. In conclusion, all these factors show that the timing of the present study seems to be appropriate for opening the debate on the conceptual framework, research methods and data collection tools of the studies on metaphor.

**Table 1.** Distribution of the Postgraduate Theses and Published Articles on Metaphor in Social Studies Education According to Years

Year	Postgraduate theses		Published articles		Total	
	n	%	n	%	n	%
2022	-	-	1	5.88	1	2.56
2021	5	22.72	4	23.52	9	23.07
2020	1	4.54	6	35.29	7	17.94
2019	5	22.72	-	-	5	12.82
2018	4	18.18	5	29.41	9	23.07
2017	1	4.54	1	5.88	2	5.12
2016	1	4.54	-	-	1	2.56
2015	1	4.54	-	-	1	2.56
2013	2	9.09	-	-	2	5.12
2012	1	4.54	-	-	1	2.56
2010	1	4.54	-	-	1	2.56
Total	22	100	17	100	39	100

According to the official data of YÖK (Council of Higher Education), there are 207 universities in Turkey, 129 of which are state universities. As can be seen in Table 2, the studies on metaphor were conducted only in 14 state universities among all existing Turkish universities. The universities that show more interest in the subject are those with older establishment dates and larger academic staff. This finding shows that the international agenda on CMT has currently not attracted enough interest among newly established universities that focus on teaching activities.

The main portion of the social studies curriculum in Turkey is mainly carried out at the secondary school level. Accordingly, the current research seems to have primarily focused on secondary school students and teacher candidates who will start working as social studies teachers in the near future (Table 3). Furthermore, conducting research with these two basic sample groups is convenient for researchers in terms of both access and the simplicity of obtaining the research permit formalities, which are important factors when it comes to the selection of sample groups. This finding of the study is supported by other studies that make the same determination about the distribution of metaphor analyzes according to sample groups and explain it with the same justification (Çakmak, 2018; Koca, Kaya, & Gökçimen, 2020; Sönmez Ektem & Özer Aytakin, 2020; Yaylak, 2020).

**Table 2.** Distribution of the Postgraduate Theses and Published Articles on Metaphor in Social Studies Education According to the University Where They Were Conducted

Universities	Postgraduate theses		Published articles		Total	
	n	%	n	%	n	%
Gazi University	3	13.63	1	5.88	4	10.25
Aksaray University	2	9.09	-	-	2	5.12
Çanakkale On Sekiz Mart University	2	9.09	-	-	2	5.12
Karadeniz Teknik University	2	9.09	-	-	2	5.12
Marmara University	2	9.09	-	-	2	5.12
Necmettin Erbakan University	2	9.09	-	-	2	5.12
Nevşehir Hacı Beştaş Veli University	2	9.09	-	-	2	5.12
Afyon Kocatepe University	-	-	1	5.88	1	2.56
Dicle University	-	-	1	5.88	1	2.56
Dumlupınar University	-	-	1	5.88	1	2.56
Adıyaman University	-	-	1	5.88	1	2.56
Ahi Evran University	-	-	1	5.88	1	2.56
Amasya University	1	4.54	-	-	1	2.56
Atatürk University	1	4.54	-	-	1	2.56
Bartın University	-	-	1	5.88	1	2.56
Bayburt University	-	-	1	5.88	1	2.56
Gaziantep University	-	-	1	5.88	1	2.56
Gazi Osman Paşa University	1	4.54	-	-	1	2.56
İnönü University	1	4.54	-	-	1	2.56
Kastamonu University	-	-	1	5.88	1	2.56
Mehmet Akif Ersoy University	-	-	1	5.88	1	2.56
Muğla Sıtkı Koçman University	1	4.54	-	-	1	2.56
Recep Tayyip Erdoğan University	-	-	1	5.88	1	2.56
Sakarya University	1	4.54	1	5.88	2	5.12
Zonguldak Bülent Ecevit University	1	4.54	1	5.88	2	5.12
Non-university institutions/organizations	-	-	3	5.88	3	7.69
Total	22	100	17	100	39	100

**Table 3.** Distribution of the Postgraduate Theses and Published Articles on Metaphor in Social Studies Education According to Their Sample Groups/Research Objects

Sample groups / Research objects	Postgraduate theses		Published articles		Total	
	n	%	n	%	n	%
Middle school students	11	50	8	42.10	19	46.34
Social Studies teacher candidates	6	27.27	7	36.84	13	31.70
Secondary school students	2	9.09	1	5.26	3	7.31
Children in prisons (12-18 years old)	1	4.54	-	-	1	2.43
Primary school students	1	4.54	2	10.52	3	7.31
Teacher candidates from different branches	1	4.54	1	5.26	2	4.87
Textbook	1	4.54	-	-	1	2.43
Total	22	100	19	100	41	100

**Table 4.** Distribution of the Postgraduate Theses and Published Articles on Metaphor in Social Studies Education According to Their Methods

Method	Postgraduate theses		Published articles		Total	
	n	%	n	%	n	%
Semi-structured interview based on questionnaire form	20	90.90	16	80	36	85.71
Document analysis	1	4.54	3	15	4	9.52
Experimental design	1	4.54	1	5	2	4.76
Total	22	100	20	100	42	

The overwhelming majority of metaphor-based studies in the field of social studies education are aimed at measuring the perceptions or attitudes of the sample group on a particular subject. For this reason, the adopted methods are qualitatively oriented descriptive analyzes, as stated in other meta-analysis studies, and are generally based on collecting data from sample groups through semi-structured interviews or questionnaire forms (Table 4) (Gezer, 2020; Koca, Kaya, & Gökçimen, 2020; Yıldızlı, Acar Erdol, Baştuğ, & Bayram, 2018). In the typical implementation of this method, a questionnaire form containing only one open-ended question is given to the sample groups and the participants are explicitly asked to compare a concept with another concept and to explain the reason for their analogies. Among the studies examined, the experimental study method, which aims to investigate the effect of metaphors on the learning-teaching process or the use of metaphors as a teaching method or teaching material, was employed only in two studies (Table 4).

**Table 5.** Distribution of the Postgraduate Theses and Published Articles on Metaphor in Social Studies Education According to their Data Collection Tools

Data collection tools	Postgraduate theses		Published articles		Total	
	n	%	n	%	n	%
Open-ended question form	19	67.85	17	68	36	67.92
Drawing an illustration or caricature	3	10.71	4	16	7	13.20
Semi-structured interview	2	7.14	2	8	4	7.54
Writing a short essay	2	7.14	-	-	2	3.77
Concept test	1	3.57	-	-	1	1.88
Document analysis	1	3.57	2	8	3	5.66
Total	28	100	25	100	53	100

The nature of the preferred method in the studies also directly determined the characteristics of their data collection tools. The most commonly used data collection tool seems to be the open-ended questionnaire consisting of an open-ended question to be filled by the participants: "A is X like/or B. Because ...". In addition to the simple questionnaire, some researchers attempted to diversify their collection tools by instructing the sample group to write a short essay or to draw illustrations and/or caricatures (Table 5).

A review of the current literature shows that the subject of metaphor is mainly located within the specialization of cognitive psychology and certain sub-branches of linguistics, such as cognitive linguistics, psycholinguistics, and neurolinguistics. Nevertheless, a close examination of the postgraduate theses reveals that none of them have been written under the supervision of an academic who has expertise in the aforementioned disciplines. Likewise, in published articles, including articles by multi-authors, the areas of expertise of the authors seem to be considerably different from the relevant disciplines, which are often categorised under the umbrella term "cognitive sciences." When we look at the areas of expertise of thesis advisors and authors, however, it can be observed that they mainly specialise in geography education, history education, and social studies education, and work in social studies education programs (Table 6). Çekiç, Öztürk and Apaydın (2018) stated in their studies in which they questioned the opinions of teachers, that the fact that researchers were far from the field they were researching was one of the main factors affecting the quality of their research and that such research did not yield results that reflected on educational practices.

**Table 6.** Distribution of the Postgraduate Theses and Published Articles on Metaphor in Social Studies Education According to the Areas of Academic Expertise of Thesis Advisors and Authors of the Articles

Expertise of thesis advisors and article authors	Postgraduate theses		Published articles		Total	
	n	%	n	%	n	%
Geography education	8	34.78	4	12.5	12	21.81
Social Studies education	7	30.43	18	56.25	25	45.45
History education	3	13.04	8	25	11	20
Primary education	3	13.04	2	6.25	5	22.72
Program development	1	4.34	-	-	1	1.81
Turkish language education	1	4.34	-	-	1	1.81
Total	23	100	32	100	55	100

Finally, when it comes to the concepts studied in the works reviewed, providing a general explanation is deemed to be sufficient enough as listing them one by one would not make a useful contribution to the aims of this research. The present study observed that the perceptions and attitudes towards the concepts proposed to be taught in the social studies curriculum were investigated both in postgraduate theses and published articles. While some studies have focused on investigating a single concept, some studies have attempted to deal with more than one concept under certain umbrella terms such as root values or universal values. While 60 of the concepts in the curriculum were studied in the graduate theses, 29 concepts were examined in the published articles. Metaphors utilised for the concepts of "patriotism, geography, tolerance, freedom, respect, love, responsibility, history and helpfulness" were questioned most in both postgraduate theses and articles. This finding of the research is supported by Gezer (2020), who has also examined the concepts in research based on metaphor analysis.

#### 4.2 Evaluation of Metaphor-Themed Studies within the Framework of CMT

In the evaluation made within the framework of CMT, answers to the following research questions were sought:

*RQ1: Has the CMT been addressed in the theoretical and conceptual framework of the study?*

The studies examined state that they consider metaphor not merely as a rhetorical ornament, but as a product of underlying cognitive processes. This fundamental premise essentially underlies their common assumption that the data obtained from the sample groups represent participants' conceptual and intellectual worlds. Although this premise is actually the central tenet of CMT, a significant portion of the studies do not mention CMT at all. The ones that mention CMT, on the other hand, seem to be content with a superficial definition of CMT. In numerical terms, CMT was not mentioned at all in 3 of the 22 postgraduate theses examined, while it was mentioned at the definition level in 19 of them. None of the studies addressed different approaches or controversial issues within the framework CMT. As for the 17 articles examined in this study, 16 of them did not mention CMT at all, while only one of them did so at the definition level.

*RQ2: Have the main/seminal references of CMT been used in the research?*

The finding of RQ1 is supported when we look at the main sources referenced in the conceptual frameworks of the studies. In the great majority of the studies examined, it has been shown that the works that can be defined as the main sources or seminal works of CMT are either not used at all or only partially referenced. The investigation revealed that 17 of the 22 theses examined referred to some of these sources, especially the studies by Lakoff and Johnson; 4 theses did not apparently benefit from the fundamental references at all, and only 1 thesis made references to the essential sources of CMT. Among the 17 articles examined, only 2 articles partially benefited from these sources, and the remaining 15 articles did not make any use of the essential references whatsoever.

*RQ3: Is the research based on a particular metaphor theory or approach?*

CMT is not fully a homogeneous theory. It incorporates different approaches and internal theoretical debates that are yet to be settled. However, none of the reviewed studies neither represent any particular CMT-internal approach or view nor refer to these theoretical differences. Therefore, it is not clear by what criteria the findings they obtained represent the intellectual and conceptual worlds of the sample groups.

*RQ4: Is it clearly and explicitly stated in the studies what will be considered as an instance of metaphor?*

The studies in question have included traditional or contemporary definitions of metaphor within their conceptual framework. Among these, some acknowledge metaphor as a literary and rhetorical element, and some as a tool for thinking. Furthermore, since the participants were actually asked to produce analogies strictly in the form of similes, some answers among the data obtained attempted to achieve rhetorical and/or literary effects. Therefore, although the main purpose of these studies seems to be about uncovering the intellectual and conceptual worlds of the participants, there is a lack of explanation as to what should be considered an instance of metaphor. Whereas a detailed justification of chosen linguistic criteria based on cognitive explanations is needed for the integrity of the analysis of the obtained data.

*RQ5: According to which metaphor coding were the data collection tools prepared?*

In both the postgraduate theses and the published articles, the participants are requested to construct an analogy according to the "A is X like or as B" template. In addition to this basic template, three of the postgraduate theses also benefited from alternative data collection tools such as picture drawing and essay writing tasks and applying concept tests to the sample group. However, according to numerous CMT theorists, this template does not constitute an instance of a conceptual metaphor but instead would be categorised as a simile, which is assumed to employ cognitive operations different from those of a conceptual metaphor. It should be noted here that the present study does not make any suggestion as to what should be considered a metaphor. The present work instead merely draws attention to the fact that there is a lack of theoretical and methodological depth where one of the fundamental discussion topics in the CMT literature is overlooked. Because if the goal is indeed about uncovering the way of thinking and conceptual repertoire of a particular sample group, then the data collection tools, according to many CMT theorists, should be designed in a way to accord with the conventional coding scheme of CMT, which is "A is B."

## 5. Conclusion and Recommendations

### 5.1 Conclusion

The metaphor analysis, which emerged as an alternative to conventional methods in exploring the conceptual worlds of target people or groups, is a systematic method that groups linguistic metaphors into conceptual categories in order to understand people's beliefs or ideas (Zhang, 2021). Therefore, there has been an increasing interest in the subject and the method in recent years. However, some elusiveness observed in the studies utilizing this method showed that there is a need for a close and detailed investigation of this still relatively novel method. In this study, metaphor analysis-based postgraduate theses and articles conducted in Turkey were analyzed not only in terms of their formal and quantitative features but also in terms of their content and theoretical frameworks. The present research is valuable in that it attempts to address the common problems with the theoretical frameworks, data collection tools, validity, and reliability of the studies utilizing the metaphor analysis method. The general conclusions regarding these works are as follows:

The overwhelming majority of studies based on metaphor analysis in the field of social studies education in Turkey have been carried out in the last five years and generally in historically well-established universities. Since the method constitutes a novel and alternative research approach for the discipline of social studies education, it has been observed that there are some failures and deficiencies chiefly in the theoretical framework, research methodology, and terminology employed for metaphor analysis.

There are many studies in the literature on the difficulties of metaphor analysis and the reliability problems that can be confronted in such studies. For example, some of the chief problems and difficulties observed by Fábíán (2013), Low (2008, 2015, 2017) and Zhang (2021) can be listed as follows: (i) the sincerity of the participants, (ii) the inconsistency of participants in repeated interviews, (iii) participants' non-uniform ability to conceive metaphorical expressions, (iv) the lack of evidence concerning the elicited metaphorical expression's capability to satisfactorily represent beliefs and thoughts, (v) the difficulty of matching metaphors with educational theories, (vi) the subjective judgments and biases of researchers. Thus, it can be concluded that research based on metaphor analysis requires diverse specialization in multiple sub-fields of linguistics, such as psycholinguistics and linguistic anthropology, and in cognitive sciences in general, which can be minimally achieved via interdisciplinary cooperation. Nevertheless, the present results indicate that the academic expertise of the authors who conduct metaphor-based studies is not even remotely related to such areas of expertise; and, despite their academic expertise, it looks like they have not benefited from interdisciplinary collaboration.

All the studies reviewed were descriptive studies based on the content analysis technique, and with a few exceptions,

all of them used a one-dimensional data collection tool. However, no research has specified to what extent these forms, which consist of a single question in the form of "A is X like or as B. Because...", meet the measurement purpose, determine the characteristics of the participants, and according to which empirical evidence the obtained results can be generalized. As stated by Seung, Park and Jung (2015) and Yıldızlı et al. (2018), this one-dimensionality in metaphor analyses renders the results insufficient, while it causes a problem of validity in terms of data collection tool and reliability within the context of the whole study. This result is further supported by some other studies showing conceptual inconsistency and carelessness, theoretical failures, lack of validity and reliability as the most common issues in academic research in Turkey (Coşkun, 2022; Çelik, Gedik, Karaman, Demirel, & Göktaş, 2014; Gezer, 2020; Yücel Toy & Güneri Tosunoğlu, 2007).

The primary aim of the studies examined was to shed light on the perception and conceptual worlds of the participants via the metaphor analysis method. This view on metaphors as "mirrors of conceptual structure" is commonly attributed to Conceptual Metaphor Theory (CMT). Therefore, if metaphors are to be analyzed not as rhetorical tools but as representations of conceptual structure, then the expectation would be to observe thorough discussions on CMT where different views and different metaphor analysis techniques / approaches within the CMT are reviewed and compared. Nonetheless, the present work revealed that a significant portion of the examined studies (i) made neither a general attempt at discussing CMT nor the different approaches found within CMT, (ii) hardly benefited from the seminal works of CMT, (iii) did not associate their methods with any particular CMT approach (iv) did not provide explicit criteria for what they classified as a conceptual metaphor. On the other hand, almost all the studies used a coding scheme like "A is X like or as B" as a data collection tool, which for numerous CMT theorists is a template for expressions containing simile, which is distinct from conceptual metaphor according to the same CMT theorists.

### 5.2 Recommendations

The present study is the first and only study based on the critical evaluation of metaphor-based research in Turkey. Indeed, further investigations and evaluations by other researchers with the inclusion of different variables constitute our central recommendation in terms of the reliability of the results obtained. Moreover, the conclusions of the present work call for the following recommendations for future research:

As many CMT theorists have pointed out, common standards of methodological quality should not be ignored in the metaphor identification process, and quantitative and qualitative research methods should be used with an understanding that they complement but not compete with each other (Cameron, 2003; Kövecses, 2011; Verspoor & Spooren, 2010). In this context, the methodological aspects of a metaphor-based study should be supported by empirical methods such as corpus-based analyses. As for thematic aspects, on the other hand, the metaphor-based works should be augmented with different research questions aiming to measure the effect of metaphor use in teaching.

A metaphor is a mental process of mapping a target conceptual domain with a source conceptual domain. It is a complex and multidimensional issue to exactly determine the extent to which metaphor is a valid representation of thoughts and behaviors. Therefore, research based on metaphor analysis should be carried out in an interdisciplinary setting which can be achieved by collaborating with researchers specializing in the intersection of psychology, anthropology, and linguistics.

The data collection tools employed should be in agreement with the research objective and the theoretical framework assumed. In this regard, the data collection tools of a study should be based on prominent experimental and empirical works found in the CMT literature and be diversified with techniques such as interviewing, drawing, repeated conversations, and clean language (Tosey, Lawley, & Meese, 2014). Triangulation should be done between the data collected through different techniques, and confirmation should be obtained from the participants, if possible, about the general results obtained.

If the aim is to understand the intellectual and cognitive activities of the participants, the studies should devote extensive discussions on CMT as they lay out their conceptual frameworks. Furthermore, these discussions on CMT must be linked with the purpose and the method of the research. To achieve this, the researcher should naturally be knowledgeable about the principal sources of CMT and subsequently, use this knowledge to construct a comprehensive conceptual framework section incorporating the main reference points. If the researcher prefers theoretical approaches that make a distinction between metaphor and simile, then the researcher should seek the expert opinions of Turkish language scholars as to how "A is B" coding in data collection tools can be better articulated in Turkish in an open-ended question form.

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## References

- Akyol, C. (2019). Metaforların kullanım alanları ve faydaları. In B. Kılcan (Ed.), *Metafor ve Eğitimde Metaforik Çalışmalar İçin Bir Uygulama Rehberi*, pp. 49-87. Pegem Akademi. <https://doi.org/10.14527/9786052410806.04>
- Aubusson, P. J. (2006). Can analogy help in science education research? In P. J. Aubusson et al. (Eds.), *Metaphor and Analogy in Science Education*, pp. 165-175. Netherlands: Springer. [https://doi.org/10.1007/1-4020-3830-5\\_14](https://doi.org/10.1007/1-4020-3830-5_14)
- Aubusson, P. J., Harrison, A. G., & Stephen, M. R. (2006). Metaphor and analogy. In P. J. Aubusson et al. (Eds.), *Metaphor and Analogy in Science Education*, pp. 1-9. Netherlands: Springer. [https://doi.org/10.1007/1-4020-3830-5\\_1](https://doi.org/10.1007/1-4020-3830-5_1)
- Bağcı Çeliksoy, R. (2019). *Öğretmen Adaylarının Değerler ve Değerler Eğitimi Algılarının Metafor Yoluyla Analizi* [Master thesis]. Atatürk Üniversitesi Eğitim Bilimleri Enstitüsü, Erzurum.
- Başkan, Ö. (2006). Türkçede dil içi dünya görüşü. *Dilde Yaratıcılık*, İstanbul: Multilingual (pp. 162-185).
- Britannica, T. Editors of Encyclopaedia (2017, December 8). *Metaphor*. *Encyclopedia Britannica*. Retrieved from <https://www.britannica.com/art/metaphor>
- Brown, K., & Miller, J. (2013). *The Cambridge Dictionary of Linguistics*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139049412>
- Çağlar Karapınar, B. (2017). *Sosyal Bilgiler Öğretmen Adaylarının Doğa Eğitimi Hakkında Metaforik Algıları* [Master thesis]. Aksaray Üniversitesi Sosyal Bilimler Enstitüsü, Aksaray.
- Çakmak, M. (2018). Türkiye'de çevre kavramı bağlamında yapılan metafor çalışmalarının içerik analizleri. *Akdeniz Eğitim Araştırmaları Dergisi*, 12(25), 172-193. <https://doi.org/10.29329/mjer.2018.153.10>
- Cameron, L. (2003). *Metaphor in educational discourse*. *Advances in Applied Linguistics*. London, UK: Continuum.
- Cameron, M., & Hill, B. (2017). Introduction. In Cameron, M., Hill, B., Stainton, R. (eds) *Sourcebook in the History of Philosophy of Language*. *Springer Graduate Texts in Philosophy*, vol 2. Springer, Cham. [https://doi.org/10.1007/978-3-319-26908-5\\_1](https://doi.org/10.1007/978-3-319-26908-5_1)
- Canbaba, Z. (2018). *Ortaöğretim Öğrencilerinin Nüfus ve Göç Kavramına İlişkin Algılarının Metafor Yöntemi İle İncelenmesi* [Master thesis]. Marmara Üniversitesi Eğitim Bilimleri Enstitüsü, İstanbul.
- Çatalkaya, D. (2019). *Ortaokul Öğrencilerinin Terör Kavramına İlişkin Metaforik Algıları*. (Master thesis). Nevşehir Hacı Bektaş Veli Üniversitesi Sosyal Bilimler Enstitüsü, Nevşehir.
- Çekiç, O., Öztürk, H., & Apaydın, S. (2018). Öğretmenlerin eğitim araştırmalarına ilişkin görüşleri. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, 19(1), 856-879. Retrieved from <https://dergipark.org.tr/tr/pub/kefad/issue/59094/850543>
- Çelik, E., Gedik, N., Karaman, G., Demirel, T., & Göktaş, Y. (2014). Mistakes encountered in manuscripts on education and their effects on journal rejections. *Scientometrics*, 98(3), 1837-1853. <https://doi.org/10.1007/s11192-013-1137-y>
- Çelik, Ş. (2021). *Ortaokul Öğrencilerinin Kök Değerler Hakkındaki Metaforik Algıları* [Master thesis]. İnönü Üniversitesi Eğitim Bilimleri Enstitüsü, Malatya.
- Çiçekler, A. N., & Aydın, T. (2019). Kavramsal metafor kuramı ve belagat: karşılaştırmalı bir inceleme. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, 16, 14-26. <https://doi.org/10.29000/rumelide.616880>
- Collins (2022). *Metaphor*. *Collins*. Retrieved from <https://www.collinsdictionary.com/dictionary/english/metaphor>
- Coşkun, R. (2022). Nitel araştırmalarda sorunlar: Seçilmiş makalelerin eleştirel bir incelemesi ve bazı öneriler. *Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Dergisi*, 23(1), 165-189. <https://doi.org/10.17494/ogusbd.1101565>

- Dancygier, B. (2017). Figurativeness, conceptual metaphor, and blending. In E. Semino & S. Demjén (Eds.), *The Routledge Handbook of Metaphor and Language*. pp. 28-41. Routledge, NY.
- Duran, Y. (2018). *Ortaöğretim Öğrencilerinin Vatan Kavramına İlişkin Algularının Metaforla Belirlenmesi* [Master thesis]. Necmettin Erbakan Üniversitesi Eğitim Bilimleri Enstitüsü, Konya.
- Evans V., & Green M. (2006). *Cognitive Linguistics: An Introduction*. Edinburgh: Edinburgh University. <https://doi.org/10.1515/COG.2006.016>
- Fábián, G. (2013). The application of improved metaphor analysis in education research. *Procedia - Social and Behavioral Sciences*, 93, 1025-1029. <https://doi.org/10.1016/j.sbspro.2013.09.323>
- Freund, M. (2017). Wilhelm von Humboldt. In Cameron, M., Hill, B., Stainton, R. (Eds.), *Sourcebook in the History of Philosophy of Language*. Springer Graduate Texts in Philosophy, vol 2. Springer, Cham. [https://doi.org/10.1007/978-3-319-26908-5\\_38](https://doi.org/10.1007/978-3-319-26908-5_38)
- Gezer, M. (2020). Sosyal bilgiler eğitimi alanında metafor kullanılan araştırmaların tematik içerik analizi. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 24(3), 1513-1528. Retrieved from <https://dergipark.org.tr/tr/pub/ataunisobil/issue/57299/782153>
- Gibbs Jr., R. W. (2011) Evaluating Conceptual Metaphor Theory. *Discourse Processes*, 48(8), 529-562, <https://doi.org/10.1080/0163853X.2011.606103>
- Glucksberg, S., & Haught, C. (2006). On the Relation Between Metaphor and Simile: When Comparison Fails. *Mind & Language*, 21(3), 360-378. <https://doi.org/10.1111/j.1468-0017.2006.00282.x>
- Glucksberg, S. (2003). The psycholinguistics of metaphor. *Trends in Cognitive Sciences*, 7(2), 92-96. [https://doi.org/10.1016/S1364-6613\(02\)00040-2](https://doi.org/10.1016/S1364-6613(02)00040-2)
- Glucksberg, S. (2008). How Metaphors Create Categories – Quickly. In Jr. R. Gibbs (Ed.), *The Cambridge Handbook of Metaphor and Thought*. Pp. 67-83. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511816802>
- İnan, D. (2021). W. B. Yeats'in imgeci şiirlerinin kavramsal metafor kuramı ile yorumlanması. *Gaziantep University Journal of Social Sciences*, 20(1), 136-145. <https://doi.org/10.21547/jss.796832>
- Israel, M., Harding, J. R., & Tobin, V. (2004). On simile. In M. Achard and S. Kemmer (Eds.), *Language, Culture, and Mind*. pp. 123-135. CSLI Publications.
- Kantekin, S. (2018). *Sosyal Bilgiler Öğretmen Adaylarının Sosyal Bilgiler, Tarih ve Coğrafya Kavramlarıyla İlgili Metaforik Algularının Metafor Analizi Yoluyla İncelenmesi* [Master thesis]. Karadeniz Teknik Üniversitesi Eğitim Bilimleri Enstitüsü, Trabzon.
- Kılıç, F. D. (2010). *İlköğretim Beşinci Sınıf Öğrencilerinin Sosyal Bilgiler Dersinde Tarih Konuları Üzerinde Oluşturdukları Metaforların Söylem Analizi Tekniği İle İncelenmesi* [Master thesis]. Çanakkale Onsekiz Mart Üniversitesi Sosyal Bilimler Enstitüsü, Çanakkale.
- Koca, İ., Kaya, M., & Gökçimen, S. (2020). Türkiye'de okul kavramına ilişkin metafor araştırmalarının değerlendirilmesi: Bir meta sentez çalışması. *Medeniyet Eğitim Araştırmaları Dergisi*, 5(1), 15-26. <https://doi.org/10.22596/cresjournal.0101.23.38>
- Kövecses, Z. (2010). *Metaphor: A Practical Introduction*. Oxford: Oxford University.
- Kövecses, Z. (2011). Methodological issues in conceptual metaphor theory. In S. Handl & H. Schmid (Ed.), *Windows to the Mind: Metaphor, Metonymy and Conceptual Blending*, pp. 23-40. De Gruyter Mouton, Berlin, NY. <https://doi.org/10.1515/9783110238198.23>
- Kövecses, Z. (2017). Conceptual metaphor theory. In E. Semino & S. Demjén (Eds.), *The Routledge Handbook of Metaphor and Language*. pp. 13-27. Routledge, NY.
- Kövecses, Z. (2020). *Extended Conceptual Metaphor Theory*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781108859127>
- Lakoff, G., & Johnson, M. (1980). Conceptual metaphor in everyday language. *The Journal of Philosophy*, 77(8), 453-486. <https://doi.org/10.2307/2025464>
- Lakoff, G., & Johnson, M. (1999), *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*, New York: Basic Books.

- Lakoff, G., & Johnson, M. (2003). *Metaphors We Live By*. Chicago: University of Chicago. <https://doi.org/10.7208/chicago/9780226470993.001.0001>
- Longman (2022). *Metaphor*. Longman Dictionary of Contemporary English Online. Retrieved from <https://www.ldoceonline.com/dictionary/metaphor>
- Low, G. (2008). Metaphor and education. In R. Gibbs, Jr. (Ed.), *The Cambridge Handbook of Metaphor and Thought*, (pp. 212-231). Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511816802.014>
- Low, G. (2015). A practical validation model for researching elicited metaphor. In W. Wan & G. Low (Eds.), *Elicited Metaphor Analysis in Educational Discourse*, (15-38) Amsterdam. <https://doi.org/10.1075/milcc.3>
- Low, G. (2017). Eliciting metaphor in education research: Is it really worth the effort? In F. Ervas, E. Gola & M. Rossi (Ed.), *Metaphor in Communication, Science and Education*, (pp. 249-266). Berlin, Boston: De Gruyter Mouton. <https://doi.org/10.1515/9783110549928-014>
- McGuinness, O. (2017). An analysis of the significance of analogies and metaphors in education, linking to experiences in the science classroom. *The STeP Journal*, 4(4), 4-8.
- Online Etymology Dictionary (2022). Retrieved from <https://www.etymonline.com/search?q=METAPHOR>
- Pragglejaz Group (2007) MIP: A method for identifying metaphorically used words in discourse. *Metaphor and Symbol*, 22(1), 1-39. [https://doi.org/10.1207/s15327868ms2201\\_1](https://doi.org/10.1207/s15327868ms2201_1)
- Seung, E., Park, S., & Jung, J. (2015). Methodological approaches and strategies for elicited metaphor-based research: A critical review. In W. Wan & G. Low (Eds.), *Elicited Metaphor Analysis in Educational Discourse*. (39-64). Amsterdam. <https://doi.org/10.1075/milcc.3>
- Sönmez Ektem, I., & Özer Aytakin, K. (2020). Eğitim alanındaki metafor arařtırmalarında eğilimler: Bir içerik analizi çalışması. *Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 36, 1-38. <https://doi.org/10.14520/adyusbd.734592>
- Steen, G. (2009). Three kinds of metaphor in discourse: A linguistic taxonomy. In A. Musolf & J. Zinken (Eds.), *Metaphor and Discourse*, pp. 25-39. Basingstoke, U.K.: Palgrave Macmillan. [https://doi.org/10.1057/9780230594647\\_3](https://doi.org/10.1057/9780230594647_3)
- Tosey, P., Lawley, J., & Meese, R. (2014). Eliciting metaphor through clean language: An Innovation in qualitative research. *British Journal of Management*, 25, 629-646. <https://doi.org/10.1111/1467-8551.12042>
- Tünkler, V. (2013). *Vatandaşlık ve Demokrasi Eğitimi Programında Yer Alan Soyut Kavramların, Becerilerin ve Değerlerin Öğrencilere Kazandırılmasına İlişkin Metaforik Bir Yaklaşım* [Master thesis]. Necmettin Erbakan Üniversitesi Eğitim Bilimleri Enstitüsü, Konya.
- Verspoor, M. H., & Spooren, W. (Eds.) (2010). *A method for linguistic metaphor identification*. Amsterdam: John Benjamins Pub. Co. 2010. ISBN 9789027288158. OCLC 650090590.
- Yaylak, E. (2020). Türkiye’de sosyal bilgiler eğitimi alanında yapılmış metaforik arařtırmaların değerlendirilmesi: Bir meta-sentez çalışması. *1st. International Congress of Pedagogical Research* (24.06.2020 - 26.06.2020), Düzce.
- Yıldızlı, H., Acar Erdol, T., Bařtuğ, M., & Bayram, K. (2018). Türkiye’de öğretmen kavramı üzerine yapılan metafor arařtırmalarına yönelik bir meta-sentez çalışması. *Eğitim ve Bilim*, 43(193). <http://dx.doi.org/10.15390/EB.2018.7220>
- Yücel Toy, B., & Güneri Tosunoğlu, N. (2007). Sosyal bilimler alanındaki arařtırmalarda bilimsel arařtırma süreci, istatistiksel teknikler ve yapılan hatalar. *Gazi Üniversitesi Ticaret ve Turizm Eğitim Fakültesi Dergisi*, 1, 1-20. Retrieved from <https://dergipark.org.tr/pub/gaziticareturizm/issue/49892/639531>
- Zeytinli, F. (2021). *5. Sınıf Öğrencilerinin Sosyal Medya Kavramına İlişkin Bilişsel Yapılarının Metaforlar Yoluyla İncelenmesi: Sosyal Bilgiler Dersi Örneği* [Master thesis]. Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- Zhang, X. (2021). Development and critiques of conceptual metaphor theory. *Theory and Practice in Language Studies*, 11(11), 1487-1491. <https://doi.org/10.17507/tpls.1111.18>
- Zopoğlu, K. (2021). *Sosyal Bilgiler Öğretmen Adaylarının Sosyal Bilimler Algılarının Metaforik Analizi* [Master thesis]. Amasya Üniversitesi Sosyal Bilimler Enstitüsü, Amasya.

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