



## What lies beneath teacher beliefs? A study on metaphoric perceptions

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### Abstract

The purpose of this qualitative study is to examine the metaphors a foreign language teacher used to describe her teaching experience and the role she adopted. The study tries to follow the conceptualizations of an experienced EFL teacher in regard to her teaching experience and the role she adopted. The data for the present study were collected by means of metaphor elicitation sheet, interview, and diary. The data were collected every month over a period of 24 months. The results revealed that during the first period of data collection (12 months), the participant teacher developed 10 different metaphors with regard to the concept of “teacher”. The number of new metaphors developed in the second period of data collection (the second 12 months) was 7, most of which implied the democratic teacher. Even though the same metaphor was used at different times, the rationale behind using the same metaphor always yielded differences.

**Keywords:** Teacher beliefs; Teacher perceptions; Metaphor; EFL; Reflection

### Introduction

It is known that teachers are influenced by their personal beliefs and these beliefs play an important role in their classroom practice. From a constructive point of view, “a teacher’s beliefs are the result of his or her self-construction. Teachers’ beliefs result from the teacher’s self-instruction, which is accumulated from social history and culture, personal experience and education.” (Xu, 2012, p.1398) That is, as Kelly (1995) suggests in his Personal Construct Theory, the teacher, like any individual, makes sense of his/her own world on the basis of his/her own personal experiences and constructs. Personal constructs as Kelly (1955) defines them “are bipolar and hierarchically organized into a construct system” through which individuals understand the world. Individuals are influenced by constructs-cognitive structures created as a function of past experiences and they can alter their constructs at any time. On the basis of a constructivist view, it is likely that teachers’ experiences change; that is, their values, beliefs, and assumptions about teaching and learning

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display changes. Given that beliefs underpin action, the need for eliciting and articulating personal beliefs of teachers becomes of great significance for professional development. However, personal theories usually exist at an implicit level; therefore, it becomes difficult to unearth and examine them. If teachers' beliefs and attitudes are not identified and examined, professional development can hardly be achieved.

### **The Use of Metaphor in Eliciting Teachers' Beliefs**

With the increasing interest in the use of qualitative methods in examining teachers' beliefs, metaphors have extensively been used to elicit personal theories of teachers (Alger, 2009; Balim and Çeliker, 2011; Döş, 2010; Leavy et al 2007; Martinez et al 2001; Saban and Keleşoğlu, 2011; Tasdemir & Tasdemir, 2011; Tatar and Murat, 2011; Thomas and Beauchamp, 2011). In the broadest sense, metaphor acts as a symbolic language in which two different ideas or concepts are used to make comparison (Hansen, 2004 in Balim and Çeliker, 2011, p.331; Palmquist, 2001). In view of Lakoff and Johnson (1980) through the use of metaphor, we can understand or experience one kind of thing in terms of another. In addition, our thoughts and perceptions become more vivid and interesting with metaphors. From another perspective, "metaphors are not just figures of speech, but constitute an essential mechanism of the mind allowing the modeling and reification of prior experience" (Zhao, Coombs, & Zhou, 2010 in Thomas and Beauchamp, 2011, p.763). When a metaphor is employed, the schema is transported from its customary realm to a new realm. A metaphor acts as a lens, a screen, or a filter, through which the metaphoric topic is viewed (Yob, 2003). Metaphors facilitate the way we comprehend experience and are necessary to understand what goes on around us (Lakoff and Johnson 1980). In line with Lakoff and Johnson, Perry and Cooper (2001) point out that "metaphors help to structure our thinking and our understanding of events." Therefore, through the use of metaphors, the way teachers conceptualize their teaching experience can be examined. Knowles (1994, p.37) claims that "the study of teachers' metaphors has proven productive as researchers seek to understand the complex processes of teaching and working in classroom". Similarly, Gillis and Johnson (2002, p. 37 in Thomas and Beauchamp, 2012, p.763) state that "because metaphors reveal our educational values, beliefs, and principles, they contain information essential to our growth as professionals". If metaphors determine the way we interpret reality and our experiences, then metaphoric awareness appears to be crucial. As for the personal and professional development of teachers the challenge is to bring operating metaphors into consciousness awareness and to consider how metaphors could be encouraging or restricting growth (Bowman, 2007).

### **Studies on teachers' metaphors**

Metaphors have been used as a research tool in a considerable number of studies in the fields of teacher education, teacher beliefs and reflection (Akillı and Seven, 2010; Aydın and Ünalđı, 2010; Aykaç and Çelik, 2011; Block, 1992; Çelikten, 2006; Massengill Shaw & Mahlios, 2008; McGrath 2006; Metin and Özmen, 2010; Özdemir, 2012; Öztürk, 2007; Saban, 2004; Saban, Koçbeker, & Saban, 2007; Tobin, 1990). Cerit (2008) studied classroom teachers' metaphors about teachers and found out that teacher is perceived as an individual who provides and disseminates knowledge. In another study that Çelikten (2006) conducted, culture and teacher metaphors used in the educational system were explored and the study revealed that the teacher is mostly seen as a doctor or a gardener. Martinez, Sauleda and Huber (2001) investigated metaphorical conceptions of teachers regarding their images of learning and most of the metaphors were behaviorist and empiricist. Akar and Yıldırım (2009) studied the changes in teacher candidates' metaphorical images about classroom management in a social constructivist learning environment and concluded that most teacher candidates held a traditional teacher-centered view of classroom management before they were subjected to a constructivist curriculum implementation. After the intervention the metaphors reported were the same, yet the descriptions depicted more innovative images. In a study by Seferođlu et al (2009), metaphorical images of pre-service and in-service teachers as windows into their schemata for thinking about teachers were explored and it was suggested that teacher candidates should be guided to transform tacit or unexamined beliefs into objectively rational beliefs. Metaphors were also used by researchers to show the change that occurs in teachers' beliefs and attitudes (Tobin, 1990; Marshall, 1990). The studies emphasized that "a change in metaphors may indicate a change in how the world of teaching is conceived, a change in the evolving story of the self" (Bullough, 1991). Studies which used metaphors as the research tool in investigating teachers' beliefs and attitudes are not limited to teaching in the general sense. Studies in the field of foreign language teaching also provided significant results and implied the power of metaphor as a research tool. In one of the studies in the context of language teaching and learning, Shaw, Barry and Mahlios (2008) explored English and foreign language teachers' metaphors and their connection with the conceptions of literacy. The findings of the study indicated that beliefs fall into nine themes including nurturing and guiding. In addition, Nikitina, Larisa & Furuoka, Fumitaka (2008) collected samples of metaphors that students generated about language teachers, and it was found out that metaphors support the enlightened eclecticism approach toward language teaching.

### **Objective of the study**

The present study displays a different perspective and thus aims to contribute to the field by eliciting the beliefs of a language teacher at two different periods of time through the use of metaphors, interview and diary. Thus, the study reveals not only the content of a teacher's beliefs but changes in the participant's beliefs over time as well.

## **METHODOLOGY**

### **Participants**

Data of the study were collected from an English language teacher over a period of 24 months. The participant was a female teacher aged 32 with twelve years experience of teaching English at university. The participant teacher had already attended professional development seminars at different times in her teaching career and had a considerable amount of knowledge about metaphor as a literary device.

### **Data Collection**

As for data collection, the metaphor elicitation method, interview and diary were used. The data were collected every month over a period of 24 months. Following the metaphor elicitation session, the participant was interviewed. The diary of the participant teacher helped the researcher develop a better insight into the reasons why specific metaphors were chosen. As the first step of data collection, each month the participant teacher was asked to complete the sentence "A teacher is.....because....." using a metaphor. After the elicitation of the metaphor, the participant was interviewed by the researcher to have her elaborate on her metaphor and thus to clarify points unclear to the researcher. As the last step, the participant teacher was asked to write her feelings, thoughts, and emotions about teaching by using the metaphor she developed in her diary on the same day of the data collection phase.

### **Analysis of Data**

The data obtained through the metaphor elicitation method were analyzed and categorized by three researchers (two EFL teachers teaching at tertiary level and involved in studies of metaphors and the researcher of the present study). In order to have a reliable categorization of the metaphors, similarities and differences were discussed. The steps used in the categorization of the metaphors can be summarized as follows:

- participant teacher's 24 metaphors and the rationale behind choosing these metaphors were listed

- main categories of metaphors were developed
- metaphors were grouped under main categories
- distribution of the metaphors in each category was displayed in tables.

As for the data gathered through diaries and interviews, content analysis was employed and interpretation of the metaphors was supported by interview and diary data.

## Results and Discussion

The findings of the study will be discussed in three sections: the metaphors developed by the participant teacher during the first year, the metaphors developed by the participant in the second year, and striking similarities and differences regarding the metaphors developed between Time 1 (the first year) and Time 2 (the second year).

**Table 1. The list of metaphors produced by the participant at Time 1 (the first year)**

Time	Metaphor	Rationale
1 <sup>st</sup> month	Fashion designer	Combining different colors produced by students to create a design
2 <sup>nd</sup> month	Fruit basket	Offering each student a different taste
3 <sup>rd</sup> month	Cook	Using views of students to make a whole
4 <sup>th</sup> month	Lighthouse	Helping students find their ways when they are lost
5 <sup>th</sup> month	Governor	Establishing order
6 <sup>th</sup> month	Painter	Drawing as many pictures as possible
7 <sup>th</sup> month	Chocolate cake	Drawing students' attention

Table1 displays the metaphors developed by the participant with respect to the concept of teacher. In each month of teaching the participant seems to adopt a different role. However, the participant showed a tendency to define a teacher as a fashion designer and a life coach as she used these metaphors twice in a period of twelve months. It should be noted that the rationale behind using these metaphors differed. It is also seen in Table 1 that for the second month, the participant teacher used the metaphor “fruit basket” in defining the role of the teacher. The data obtained from the diary reveal an extended elaboration on this metaphor:

### Extract 1

I am a fruit basket full of colorful and delicious fruits. I provide variety for the students so each student picks up the fruit s/he wants. I like being colorful and I believe a teacher should always provide alternatives to the students because not everyone in class enjoys the same way of learning. For some I try to be a cool

teacher, for some I play the sensitive while for some I play the person difficult to reach.

Another metaphor for the concept of teaching is “cook” developed by the participant in the third month. It is important to note that this metaphor has also been developed by teachers in other studies (Seferoğlu et al, 2009; Saban, 2004). Seeing the teacher as a cook implies the role of the teacher as the producer: a role included in the category of “autocratic teacher” (Oxford et al.,1998). As for the fourth month of teaching, the teacher developed the metaphor “lighthouse” by which she focused on the role of the teacher as the guide. For the fifth week, the metaphor for the concept of teacher was “governor”. The use of the metaphor “governor” implies autocracy in which the teacher relies on her power and shows little interaction with students. The participant’s use of “painter” for the concept of teacher in the sixth month implies the artistic role of the teacher and assigns her the role of the teacher as the producer. The metaphor developed during the seventh month seems quite noteworthy as it introduces a different role of the teacher. By using the metaphor “chocolate cake” the participant believes that almost everyone in the classroom likes to have a piece of chocolate cake as it looks delicious and attractive. The metaphor the participant teacher used twice at Time 1 (the first year) is “life coach”. In her diary she stated the following:

### Extract 3

I am so glad that I help some of the students to work on some specific skills and improve them. I know them; when they try they will achieve great things. For example, one student in my class thought that she was so bad at expressing herself. However, I thought the opposite. I just told them to work on the organization of ideas. In her presentation we both saw the development.

**Table 2. The list of metaphors produced by the participant at Time 2 (the second year)**

Time	Metaphor	Rationale
13 <sup>th</sup> month	Diamond	Creating desire for the students to interact with the teacher
14 <sup>th</sup> month	Mother nature	Protecting students
15 <sup>th</sup> month	Chocolate cake	Creating desire for students to be involved in class activities
16 <sup>th</sup> month	Life coach	Helping students overcome their weaknesses
17 <sup>th</sup> month	Life coach	Helping learners become aware of their strengths
18 <sup>th</sup> month	Life coach	Helping learners set goals in order to achieve their aims
19 <sup>th</sup> month	Light	Helping learners find their way
20 <sup>th</sup> month	Trend-setter	Introducing originality
21 <sup>st</sup> month	Life coach	Helping students deal with problems they encounter
22 <sup>nd</sup> month	Energizer	Providing students with energy
23 <sup>rd</sup> month	Tourist guide	Helping students see the beauties
24 <sup>th</sup> month	Doctor	Offering students the cure they need

In Table 2, the metaphors developed by the participant during Time 2 (the second year) are shown. Of the 12 metaphors of teacher, the metaphor “life coach” was used by the participant four times. During the 13<sup>th</sup> month, the participant teacher developed the metaphor “diamond” as she believed that she created desire for the students to interact with her was seen. In the 14<sup>th</sup> week of data collection, the participant’s metaphor for the concept of teacher was “mother nature”. The following extract reveals more about the reason why the teacher developed this metaphor:

#### **Extract 4**

Mother nature always gives you the feeling of protection. You always find a way to secure yourself. I feel the same. Sometimes my students feel lost and confused. They need shelter. They need to rest and regain their confidence. I try to help them with these.

Another metaphor developed by the participant teacher during the 15<sup>th</sup> month was “chocolate cake”. Surprisingly, the metaphor developed during the 16<sup>th</sup>, 17<sup>th</sup>, and 18<sup>th</sup> months is “life coach”. In the interview, the participant stressed that in the course of time, students become aware of their weaknesses and these weaknesses affect their psychology in a bad way and result in either failure or alienation. The following extract illuminates the rationale:

#### **Extract 5**

Most of the time students become aware of their weaknesses when asked to carry out some activities in or out of class. At those times, their motivation decreases and they mostly give up the struggle and remain silent. Adopting the role of a life coach, I try to help them overcome their weaknesses.

Similar to the rationale given for the metaphor “life coach” developed during the 16<sup>th</sup> week, the reasons for using this metaphor during the 17<sup>th</sup> month emphasize the importance of providing help to the students but this time in regard to becoming aware of their strengths. The reason for using the same metaphor during the 18<sup>th</sup> week implies another important role of the teacher as a life coach: helping learners set goals in order to achieve their aims. As for the 19<sup>th</sup> month of data collection, Table 2 shows that the participant developed the metaphor “light” and the rationale behind using this metaphor was helping learners find their way. When the reasons for using this metaphor are analyzed, it is seen that the common point emerges as “helping students find their way”. Quite an interesting metaphor was developed by the participant during the 20<sup>th</sup> month of data collection. As to describe the concept of teacher, the participant used the metaphor “trend-setter”. The extract taken from interview data better clarifies the reasons for using this metaphor

### **Extract 6**

I am not a person who only transmits information in class. I am a role model for most of my students. Students imitate their teachers. For this reason, I always feel that I should introduce originality in class. This could be about the way I dress, the way I teach or the way I handle the situations.

The metaphor developed by the participant during the 22<sup>nd</sup> month of data collection introduces quite a different role of the teacher: energizer. The diary kept by the participant reveals more about the reasons for using this metaphor:

### **Extract 7**

This week was rather upsetting for most of my students. As a result of their loaded schedule and assignments I saw many students lacking in motivation in class. They were absent minded and isolated. As a person who knows the importance of positive energy, I felt that I was obliged to activate them and give them the vitality they need.

Another metaphor which was also developed by teachers in different studies (Seferoğlu et al, 2009; Saban, 2004) is “tourist guide”. The participant developed this metaphor during the 23<sup>rd</sup> month of data collection. As the last metaphor developed at the end of the study, the metaphor “doctor” which implies the healing offered by the teacher is seen. The interview data explain why the participant in this study developed this metaphor:

### **Extract 8**

Sometimes I feel that I am the doctor and my students are my patients. Each one of them has a different problem and they all expect me to give them the medication – the cure they need. In that way, they seem to feel better.

## **Discussion of Findings**

Analyzing the metaphors developed by the participant over a period of 24 months, it is seen that while some of the metaphors are repeated, some occur only once. Throughout 24 months, the participant produced 17 different metaphors. (see also Table 1 and Table 2). The table below shows these metaphors in regard to the categories of the teacher’s role. The categories were adapted from Oxford et al (1998).



**Table 3. The metaphors and the implied role of the teacher both at Time 1 and Time 2**

Month	Metaphor	Teacher's role	Month	Metaphor	Teacher's role
1	fashion designer	producer	13	Diamond	resource
2	fruit basket	resource	14	mother nature	protector
3	Cook	producer	15	chocolate cake	leader
4	Lighthouse	guide	16	life coach	facilitator
5	Governor	leader	17	life coach	facilitator
6	Painter	producer	18	life coach	facilitator
7	chocolate cake	leader	19	Light	guide
8	Compass	guide	20	trend-setter	model
9	fashion designer	producer	21	life coach	facilitator
10	life coach	facilitator	22	Energizer	facilitator
11	magic carpet	facilitator	23	tourist guide	guide
12	life coach	facilitator	24	Doctor	care taker

It is seen that almost every month the participant developed a different metaphor to describe her role as the teacher during Time 1. Only the metaphors “fashion designer” and “life coach” were used more than once. It can be argued that the teacher’s beliefs about her role display changes in content. In addition, the metaphors developed at Time 1 imply both the autocratic teacher (e.g. cook and painter) and the democratic/participatory teacher (e.g. compass, life coach, and magic carpet). The analysis of the metaphors developed at Time 2 reveals that over a period of 12 months, the participant developed 9 different metaphors which mostly implied the democratic/participatory role of the teacher. It is also noteworthy to mention that in contrast to Time 1, the metaphor “life coach” appeared four times. This finding may seem to be contrasting with the view that teachers’ beliefs and attitudes change. However, it is important to note that the changes lie in the reasons why the participant used this metaphor at different times (see Table 2).

### Conclusion

The findings of the study, which aimed to follow the conceptualizations of an experienced teacher, showed that during the first period of data collection (the 12 months), the participant teacher developed 10 different metaphors with regard to the concept of “teacher”. In addition, the metaphors which the participant used twice were “fashion designer” and “life coach”. The metaphors used in the first period of data collection referred both to autocratic and democratic teacher. The number of new metaphors developed in the second period of data collection (the

second 12 months) was 7 most of which implied a democratic teacher. Of the 17 metaphors developed at Time 1 and Time 2, 8 of the metaphors were about people (doctor, fashion designer) while the other 9 were the metaphors of concrete nouns (compass, chocolate cake, diamond). The participant teacher's beliefs regarding her role seemed to display less change at Time 2 as compared to Time 1. Even though the same metaphor was used at different times, the rationale behind using the same metaphor always yielded differences. The most frequently used metaphor was "life coach" which implies the democratic/participatory teacher. It is believed that "a change in metaphors may indicate a change in how the world of teaching is conceived, a change in the evolving story of the self" (Bullough, 1991). Therefore, because of their functionality in seeing phenomena and expressing them and more specifically, understanding the teaching profession, these 14 metaphoric themes and relevant rationale for each metaphor provide opportunities for educational researchers to understand modern teaching views and tendencies better. The metaphors also offer some insights into further research and discussion.

### **Implications of the study**

Teachers' beliefs, perceptions, attitudes, and values change and these changes both have a role in how teachers shape the roles they adopt and effect the development of teachers' professional identities. Teachers' perceptions and the changes in their perceptions can best be unearthed through reflection which leads to awareness. In discovering the personal beliefs of teachers, the use of metaphors is of utmost importance as metaphors determine our understanding of events and the way we structure our thinking. The findings of the present study has revealed that through the use of metaphors, teachers' personal theories which exist at an implicit level can be elicited and the metaphors constructed by teachers provide deep insights into how teachers conceptualize their teaching. The present study has also shown that the metaphors change over time (which shows the change in teachers' perceptions, beliefs, and values) and even though the same metaphors are used at different times the meanings that teachers attach to the same metaphor can change. For these very specific reasons, the use of metaphors in any step taken to help teachers develop themselves both personally and professionally should be given utmost importance. That is, the use of metaphors should be an indispensable component of teacher training programs, teacher development workshops or teachers' personal attempts to develop themselves.

### **References**

- Akar, H., & Yildirim, A. (2009). Change in teacher candidates' metaphorical images about classroom management in a social constructivist learning environment. *Teaching in Higher Education, 14*(4), 401-415.

- Akıllı, M., & Seven, S. (2010). An investigation of prospective teachers' attitudes towards the profession of teaching. *Inönü University, Journal of Faculty of Education*, 11(3), 61-73.
- Alger, C. (2009). Secondary teachers' conceptual metaphors of teaching and learning: changes over the career span. *Teaching and Teacher Education: An International Journal of Research and Studies*, 25(5), 743-751.
- Aydın, F., & Ünalı, Ü. E. (2010). The analysis of geography teacher candidates perceptions towards "geography" concept with the help of metaphors. *International Online Journal of Educational Sciences*, 2(2), 600-622.
- Aykaç, N., & Çelik, Ö. (2011). *Öğretmenlerin ve öğretmen adaylarının eğitim programına ilişkin metaforik algılarının karşılaştırılması*. 1. Uluslararası Eğitim Programları ve Öğretim Kongresinde sunulan bildiri, Eskişehir, Türkiye.
- Balim, A. G., & Çeliker, H. D. (2011). Prospective science and technology teachers' metaphors related to science and technology teacher concept. Retrieved Jan 17, 2013 from <http://web.deu.edu.tr>
- Block, D. (1992). Metaphors we teach and live by. *Prospect*, 7(3), 42-55.
- Bowman, M. A. (2007). Metaphors we teach by: understanding ourselves as teachers and learners. Retrieved January 17, 2013 from <http://teaching.uchicago.edu/oldsite/pod/96-97/Metaphors.html>.
- Bullough, R. V. Jr. (1991). Exploring personal teaching metaphors in pre-service teacher education. *Journal of Teacher Education*, 42(1), 43-51.
- Çelikten, M. (2006). Culture and teacher metaphors used in educational system. *Social Sciences Journal*, 21, 269-283.
- Cerit, Y. (2008). Öğretmen kavramı ile ilgili metaforlara ilişkin öğrenci, öğretmen ve yöneticilerin görüşleri. *Türk Eğitim Bilimleri Dergisi*, 6(4), 693-712.
- Döş, İ. (2010). Metaphoric perceptions of candidate teachers to the concept of inspectors. *Gaziantep University Social Sciences Journal*, 9(3), 607-629.
- Kelly, G. A. (1955). *The Psychology of Personal Constructs: A Theory of Personality*, New York: Norton.
- Knowles, J. G. (1994). Metaphors as windows on a personal history: a beginning teacher's experience. *Teacher Education Quarterly*, 2(21), 37-66.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.
- Leavy, A. M., McSorley, F. A., Bore, L. A. (2007). An examination of what metaphor construction reveals about the evolution of pre-service teachers' beliefs about teaching and learning. *Teaching and Teacher Education*, 23, 1217-1233.
- Massengill, S. D., & Mahlios, M. (2008). Pre-service teachers' metaphors of teaching and literacy. *Reading Psychology*, 29(1), 31-60.
- Marshall, H. H. (1990). Metaphor as an instructional tool in encouraging student teacher reflection. *Theory into Practice*, 24, 128-132.
- Martinez, M. A., Saulea, N., Huber, H. G. (2001). Metaphors as blueprints for thinking about teaching and learning. *Teaching and Teacher Education*, 17, 965-977.
- McGrath, I. (2006). Teachers' and learners' images for coursebooks. *ELT Journal*, 60(2), 171-180.
- Metin, M., & Özmen, H. (2010). Biçimlendirici değerlendirmeye yönelik öğretmen adaylarının düşünceleri. *Milli Eğitim Dergisi*, 187, 293-310.
- Nikitina, L., & Furuoka, F. (2008). Measuring metaphors: a factor analysis of students' conceptions of language teachers. *Metaphor.de*, 15, 161-180.
- Oxford, R., Tomlinson, S., Barcelos, A., Harrington, C., Lavine, R. Z., & Saleh, A. (1998). Clashing metaphors about classroom teachers: toward a systematic typology for language teaching field. *System*, 26(1), 3-50.
- Özdemir, S. M. (2012). Metaphoric perceptions of prospective teachers regarding the concept

- of curriculum. *Journal of Theoretical Educational Sciences*, 5(3), 369-393.
- Öztürk, Ç. (2007). Sosyal bilgiler, sınıf ve fen bilgisi öğretmen adaylarının coğrafya kavramına yönelik metafor durumları. *Journal of Faculty of Education, Abi Evran University*, 8(2), 55-69.
- Palmquist, R. A. (2001). Cognitive style and users' metaphors fr the web: an axploratory study. *Journal of Academic Librarianship*, 27(1), 24-32.
- Perry, C., & Cooper, M. (2001). Metaphors are good mirrors: reflecting on change for teacher educators. *Reflective Practice*, 2(1), 41-52.
- Saban, A. (2004). Giriş düzeyindeki sınıf öğretmenleri adaylarının "öğretmen" kavramına ilişkin ileri sürdükleri metaforlar. *Türk Eğitim Bilimleri Dergisi*, 2(2), 131-155.
- Saban, A., & Keleşoğlu, A. (2011). Bilgisayar öğretmeni adaylarının okul ve bilgisayar öğretmeni kavramlarına ilişkin zihinsel imgeleri. *Kuram ve Uygulamada Eğitim Bilimleri*, 11(1), 423-446.
- Saban, A., Koçbeker, B. N., & Saban, A. (2007). Prospective teachers' conceptions of teaching and learning revealed through metaphor analysis. *Teaching and Teacher Education*, 17, 123-139.
- Seferoğlu, G., Korkmazgil, S., Ölçü, Z. (2009). Gaining insights into teachers' way of thinking via metaphors. *Educational Studies*, 3(3), 23-335.
- Shaw, M., Barry, A., & Mahlios, M. (2008). Pre-service teachers' beliefs and practices: innovations and metaphors. *Paper presented at the annual meeting of the American Association of Colleges for Teacher Education, New Orleans*.
- Taşdemir, M., & Taşdemir, A. (2011). *Teachers' metaophors on K-8 curriculum in Turkey*. Paper presented at the 2<sup>nd</sup> International Conference on New Trends in Education and Implications, Antalya- Turkey.
- Tatar, N., & Murat, S. (2011). Perceptionsof the preservice teachers toward assessment. *E-international Journal of Educational Research*, 2(4), 70-88.
- Thomas, L., & Beauchamp, C. (2011). Understanding new teachers' professional identities through metaphor. *Teaching and Teacher Education*, 27, 762-769.
- Tobin, K. (1990). Changing metaphors and beliefs: a master switch for teaching. *Theory into Practice*, 29(2), 122-127.
- Xu, L. (2012). The role of teachers' beliefs in the language teaching-learning process. *Theory and Practice in Language Studies*, 2(4), 1397-1402.
- Yob, I. M. (2003). Thinking constructively with metaphors. *Studies in Philosophy and Education*, 22, 127-138.