Exploring EFL Teachers’ Cognitive Models Through Metaphor Analysis

Hui Xiong¹, Lan Li¹, and Yingmei Qu²

Abstract
This study aims to investigate how a group of Chinese university teachers developed their cognitive models by using “English as a Foreign Language (EFL) teachers” metaphors. The research method includes an open-ended questionnaire, a checklist questionnaire, and verbal reports. The goal for this research is twofold. First, we will present those metaphors we believe to be the most frequently used or most central in shaping the thoughts or ideas they have had for EFL teaching and learning. Second, we will provide a description of their internal process of developing cognitive models, as well as factors that could account for such models. The findings showed that (a) most of us had three ways of understanding EFL teachers in terms of the educational journey metaphor, the educational building metaphor, and the educational conduit metaphor; (b) we used such a cluster of converging cognitive models as the instructor model, the transmitter model, and the builder model to construct definitions for EFL teachers, with the instructor model as a central model; and (c) metaphor can actually serve as a useful, effective, and analytic tool for making us aware of the cognitive model underlying our conceptual framework.

Keywords
EFL teachers, educational journey metaphor, educational building metaphor, educational conduit metaphor, cognitive model, instructor model, transmitter model, builder model

Introduction
The past three decades have witnessed a rapid development of cognitive science in both theoretical exploration and practical application in every corner of cognition. Language teaching and learning are no exception. With the new ideas of cognitive science introduced into language education, researchers are looking beyond the mere examination of teacher behaviors and are studying teacher cognitions from different perspectives (Borg, 2006; Borko & Putnam, 1996; Calderhead, 1996; Cheng & Tang, 2010; Ernest, 2001; Gebhard, 2009; Johnson, 2006; Kelly, 2006; Lantolf, 2004; Raymond, 1997; Shulman, 1986b). Shulman (1986a) and Brown and Barid (1993) have recommended a more comprehensive study of the wide variety of teachers’ cognitions and their relationship to a broader repertoire of teaching actions in the classroom. Artzt and Thomas (2012) have conducted a systematic investigation on a relationship between teacher’s instructional practice and their underlying cognitive models from a cognitive perspective, with the findings that knowledge, beliefs, and goals directly have formed a network of cognitive models that direct and control the instructional behaviors of teachers in the classroom. Teacher cognition has played an active role in classroom decision making and is crucial to the process of teaching. Understanding teacher cognition as a means of being better able to understand what it is to be a language teacher is very fundamental (Borg, 2006). Work examining the “processes” of teacher cognition is, to some degree, correlated to significant change in teacher trainee’s belief, which would comprise teachers’ professional practice (Borg, 2009, 2011). All these researches have suggested the importance of examining teachers’ cognitive models.

For English as a Second Language (ESL) or English as a Foreign Language (EFL) teachers, the identification and research into cognitive models they develop can be a basis for enabling them to voice their internal thought on their instructional practice and underlying cognitions in a structured, comprehensive manner. A close examination of the cognitive models may not only provide them with some insights into their knowledge structure, but also provide ESL or EFL teachers with the same awareness, which, in turn, can help them to reorganize or make adjustments to their instructional practice. However, in ESL or EFL teacher research, much existing literature has primarily explored the content

¹Southwest Forestry University, Kunming, China
²Northeast Normal University, Changchun, China

Corresponding Author:
Hui Xiong, Department of Foreign Languages, Southwest Forestry University, Panlong District, Kunming, Yunnan 650224, P.R. China. Email: tracy_518@163.com
of teachers’ cognitions, whereas the “process” of language teachers’ cognitive thinking has remained relatively unexplored (Borg, 2006, 2009). To fill this gap, in this article, the authors conduct investigations into how groups of Chinese university teachers constructed their cognitive thinking or models by using their metaphors in a specific context of EFL teaching in China, where English is instructed just as a subject rather than for a communicative purpose.

Literature Review

Cognitive models and metaphors provide the rationale for this study. According to Lakoff (1987), people organize knowledge by means of structures called idealized cognitive models (ICMs), which, in turn, allow them to theorize, construct, and understand the world. Such models come from four sources: Fillmore’s frame semantics, Lakoff and Johnson’s theory of metaphor and metonymy, Langacker’s cognitive grammar, and Fauconnier’s theory of mental spaces (Lakoff, 1987). These models are derived from basic principles of cognition (Anderson & Lebiere, 1998). A cognitive model is a coherent, in large part nonlinguistic, knowledge structure, and a representation of multimodal conceptual entities (Evans, 2006) that can be used as a basis for perceptual simulations (see Barsalou, 1999; and others, for example, Jesse, 2002; Zwaan, 2004).

Lakoff (1999) has established a theory of embodied cognition and claimed that our concepts and forms of reason arise from our bodily structures, sensorimotor experiences, and interactions with the environment. In their claim, they have also identified the importance of imaginative capacities and metaphor in cognition, without which we could not further structure or understand our experience. Another one of the most important claims they have made is that we are usually unaware of our thought process, which has been referred to as “backstage cognition” by Fauconnier (1994). In summary, cognitive models relate to coherent bodies of knowledge, procedural knowledge, and knowledge of more abstract entities. They are built from our personal interaction with the surrounding environment both linguistically and non-linguistically, modified and renewed by ongoing experience.

As for the way cognitive models of ESL or EFL teachers are studied, a number of researchers in language teacher education have demonstrated that metaphors represent cognitive and affective distillations of teachers’ fundamental knowledge about teaching (Cortazzi & Jin, 1996). Metaphor, as a mediating psychological tool, plays an important role in cognitive modeling, and is held to serve as evidence of its role in structuring not only how we talk but also how we think and act (Lakoff, 1984). The essence of metaphor is seen in how one mental domain is conceptualized in terms of another (Lakoff, 1993). According to Lakoff and Johnson, metaphor is what makes our abstract thought possible, and a large part of self-understanding is the search for appropriate personal metaphors that make sense of our lives. The purpose of self-understanding is the continual development of new life stories about ourselves. Metaphors can serve as a means for teachers to verbalize their “professional identity” and have, thus, played an important role in teachers’ personal practical knowledge. In other words, metaphors can indicate the way teachers think about teaching and, therefore, direct the way they act in the classroom (Clandinin, 1986; Ellis, 2001, 2003; Kramsch, 2003; Pajak, 1986; Zapata & Lacorte, 2007). With metaphors, teachers will mediate understanding of their beliefs about teaching in the classroom and accordingly to predict behaviors likely to follow from them (de Guerrero & Villamil, 2002). Provenzo, McCloskey, Kottkamp, and Cohn (1989) have pointed out that it is only by a process of critical reflection on metaphors that language teachers can understand and combine the unknown into what they already know. Hart (2009) has conducted an intensive investigation into the effects of sharing and discussing metaphors for cognition in terms of writing and found that discussing metaphors can promote mutual understanding between students and teachers and, thus, resolve classroom conflicts. In a sense, metaphors can function as a powerful tool in gaining insight into students’ and teachers’ cognition (Li, 2011). Metaphor is a useful way of bringing implicit assumptions to awareness, encouraging reflection, finding contradictions, and fostering change in educational beliefs and practices (see, for example, Cameron & Maslen, 2010; de Guerrero & Villamil, 2002; Munby, 1987; Tobin, 1990).

Recognizing the critical role metaphors play in conceptualizing fields of knowledge, educational researchers have been using metaphor as a research tool to investigate language teacher’s cognition (Cameron & Low, 1999). The study of teachers’ metaphors appears to be a fruitful, indirect way to reveal important aspects of teachers’ cognition: for example, how teachers plan or make decisions, or how they give meaning to their experience (Munby, 1986). In short, metaphor is an essential mental tool, which should be harnessed as an instrument of imaginative rationality (Lakoff & Johnson, 1980), or a problem-solving device applicable to all fields, including language learning and teaching. Metaphors have a function of organizing systemic concepts in teacher’s cultural-cognitive models of learning (Riley, 1997). It has been documented that metaphor has a preponderant place as a cognitive tool (Green, 1993; Petrie & Oshlag, 1993) and as a teaching one (Low, 1988; Martinez-Duenas, 1988; Ponterotto, 1994; Sticht, 1994). Thus, one method of making EFL teachers more aware of their cognitive models is to encourage them to examine the way they use metaphors to describe their understanding of language teaching.

The Study

Research Questions

This empirical research was designed to address three questions as follows:
Research Question 1: How do Chinese EFL university teachers use metaphors to describe their beliefs concerning English teachers?

Research Question 2: What cognitive models do Chinese EFL university teachers develop by using such metaphors?

Research Question 3: What are the factors that might result in the differences in EFL teachers’ cognitive models?

Participants

There were two groups of participants taking part in this study during two stages. The first group participating in the study during the first stage was comprised of 20 EFL university teachers randomly selected from 11 Chinese universities (5 engineering colleges and 6 regular universities), most of them are Chinese visiting scholars to the University of California (UC), Berkeley or other universities so as to ensure the representativeness and reliability of the samples. All the participants of this study have at least 8 years of English teaching experience, 18 of whom have received PhD degrees in applied linguistics or American literature. The second group was comprised of 30 EFL teachers randomly selected from the Department of Foreign Language at a university in China. Compared with the first group, the degrees the second group have received are comparatively lower, and 95% of them have just received MA degrees in linguistics or literature. In total, 15 participants from the second group have admitted taking part in some professional teaching training before or after their engagement in English teaching.

Instruments

Three methods were used in the whole research: The first method was an open-ended questionnaire, the second method was a checklist questionnaire, and the third method was verbal reports. Below is a detailed description of each.

Open-ended questionnaire. To validate how efficiently EFL teachers could generate metaphors to make sense of their own experiences and understanding of the English language, teaching, and learning in a very natural way, a questionnaire (Appendix A) was worked out and conducted among the first group of 20 EFL university teachers during the first stage in December 2012. The questionnaire followed Wan’s (2007) framework on metaphor elicitation and consisted of two parts: (a) their demographical information, such as educational background, current academic position, years of teaching experience, and so on; and (b) a metaphor elicitation task by asking them to complete three specific open-ended questions: (i) An English teacher is . . . , because . . . ; (ii) English learning means . . . ; and (iii) The English language is . . . . To ensure the validity of questionnaire results, all the participants in the first group were required to write down at least three sentences but not more than five as the answers to each question in metaphorical language, the length of each sentence being limited to 10 words, for in this way, participants would be prevented from using a single metaphor repeatedly while others would use a broader range. All of these instructions were given orally before the questionnaire. As the research aims to investigate how participants used metaphors to describe their very basic cognitive beliefs as EFL teachers, it does not matter whether they use the same conceptual metaphors repeatedly. All the data obtained from this part would serve as the basis for the checklist questionnaire.

Checklist questionnaire. The author has collected 60 sentences from the first group of participants in the open-ended questionnaire. After that, the author analyzed all the sentences through the traditional approach outlined by Cameron and Low (1999) and found that only 20 of them were analyzable and, therefore, valid. To illuminate underlying themes in our participants’ responses, the authors systematically examined some influential books in the field of both language teaching and general education (Bailey & Nunan, 1996; Brookfield, 1995; Oxford, 1990; Vygotsky, 1978) and included four metaphors (English teacher as competitor, mind-and-behavior controller, repeater, and entertainer) from studies conducted by other researchers (Oxford et al., 1998) as well as two metaphorical statements (English teacher as conduit and nurturer) made by educational theorists and methodologists (Oxford et al., 1998), all six metaphors being common and popular in the field of EFL teaching (Oxford et al., 1998). Combined with the above-mentioned metaphors, a checklist questionnaire consisting of 26 metaphors (Appendix B) was distributed to the second group of 30 EFL teachers randomly selected from the Department of Foreign Language at a university in China. The questionnaire was designed to address two questions: (a) How similar or different are EFL teachers’ metaphors of the English language teaching and learning compared with the group members? and (b) How are the metaphors EFL teachers have generated in their instructional practice linked to their cognitive models?

Verbal reports. There are a variety of procedures that could be used to investigate how human beings think through tasks, among which verbal reports are considered as an appropriate data source (Hamilton, Nussbaum, & Snow, 1997; Leighton & Gierl, 2007; Norris, 1990). A verbal report is an individual’s description of his or her internal processes and, therefore, is used to develop cognitive models (Ericsson & Simon, 1993). Verbal reports are usually conducted using one-to-one interviews. Thus, in this research, to investigate the factors determining differences in cognitive models, 10 EFL teachers were asked to verbalize every thought that came to mind when the metaphor was generated or selected. The questions from the interview are shown in Appendix C.

Data Collection and Analysis

All the linguistic metaphors EFL teachers generated to describe their knowledge about English language teaching and learning, and selected from other studies, were first coded and
Table 1. Summary of Categorization of Metaphors.

| Categories                          | Participants |
|------------------------------------|--------------|
| Educational journey metaphor       | 147          |
| English teacher as instructor      | 24           |
| English teacher as director        | 17           |
| English teacher as tour guide      | 26           |
| English teacher as candle          | 11           |
| English teacher as bridge to different cultures | 20 |
| English teacher as lover           | 10           |
| English teacher as nurturer        | 15           |
| English teacher as learning partner | 15         |
| English teacher as entertainer     | 9            |
| Educational building metaphor      | 136          |
| English teacher as manufacturer    | 11           |
| English teacher as competitor      | 3            |
| English teacher as judge           | 9            |
| English teacher as doctor          | 12           |
| English teacher as mind-behavior controller | 4  |
| English teacher as coach           | 20           |
| English teacher as flintstone      | 12           |
| English teacher as engineer        | 10           |
| English teacher as machine         | 8            |
| English teacher as parent          | 7            |
| English teacher as scaffold        | 11           |
| English teacher as cook            | 7            |
| English teacher as activity designer | 19         |
| Educational conduit metaphor       | 40           |
| English teacher as envoy           | 10           |
| English teacher as conduit         | 10           |
| English teacher as repeater        | 9            |
| English teacher as ambassador      | 11           |

Results

Table 1 shows the three conceptual categories and the total number of participants who used each conceptual metaphor, which are represented by the alphanumeric code T 147, T 136, and T 40, respectively. It also can be seen from Table 1 that there were some differences in interpretations of images and emphasis of EFL teachers in the categories of journey, building, and conduit metaphors, although not so marked.

Three Main Categorizations of Metaphors

Table 1 lists 26 distinct metaphors, which were later classified as species of the three conceptual metaphors. It is important to stress that the author was not only seeking to identify every metaphor used in the text but also to present those EFL teachers believed to be the most frequently used or most central in shaping their thoughts or ideas when it comes to EFL teaching and learning, based on the results of the checklist questionnaire.

Educational journey metaphor. We start with this perspective because, from all the responses to either the open-ended questionnaire or the checklist questionnaire we received, this was the most prevalent and frequently used image of EFL teaching (T 147) with nine metaphors. Lakoff (1999) has identified two common ways we structure the events: the Location Event-Structure and the Object Event-Structure metaphors, both of which make use of the primary metaphors Causes Are Forces and Changes Are Movements. In the Location Event-Structure metaphor, events are conceptualized as a change of states viewed as movement from one bounded region in space to another with a desired location (destination) as goal or purpose. Therefore, we can move from one state to another over a period time to reach a final state. In the Object Event-Structure metaphor, events are conceptualized as the acquisition or loss of attributes viewed as possessable objects. For instance, Harry can get a headache or lose his headache. Therefore, purposes are conceptualized in this metaphor as desired objects—things you want to get.

As specific types of events, EFL teaching and learning are often conceptualized in terms of these same metaphors. Given the Location Event-Structure metaphor, English language teachers and learners start from their first language, and move along the path toward the desired purpose as destination. In this case, EFL teaching and learning can be viewed as a journey with a number of intermediate purposes, which is in accordance with what Lakoff (1999) has outlined in Long-Term Activities Are Journeys metaphor, derived from the Location Event-Structure metaphor, where EFL learners are travelers and teachers serve as guide. The curriculum can provide a plan or itinerary. This is referred to as the educational journey metaphor. EFL teachers in this category were described either as tour guide (T 26), or instructor...
itself emerges and grows stronger and more stable. It fits the
relation, can be gradually removed bit by bit, when the building
scaffolding, as a temporarily set of skills, knowledge, or values.
individuals, who waited to be led by others into a prescribed
learning was to shape students into mechanical and passive
social product rather than a creative individual. The goal of
control over students, and treat students as a standardized
the above situation, teachers were encouraged to have strict
coach (T 20), strict parent (T 7), and activity designer (T 19),
portrayed as competitor (T 3), doctor (T 12), judge (T 9),
compliant, faithful, skilled, and knowledgeable workforce
has framed students in a very passive role, where teachers are
considered mold by strictly following a set of standardized sci-
A journey may have a guide who points out things of interest along the way, learners also expect their
teachers to be just like an entertainer (T 9) so as to stimulate
their interest in English language learning.

Educational building metaphor. This metaphor is very com-
mon and popular in the education and psychological litera-
ture. In the building metaphor, five aspects are emphasized: content, progress, basicness, strength, and structure, referred
to by Lakoff and Johnson (1980) as the Argument Is a Build-
ning metaphor. In this metaphor, the outer shell and founda-
tion of the building constitute the content. Basicness lies in
the building’s foundation, the deeper, the more basic. Strength shows how strong or weak the internal connection
is and consists of both the building’s capacity to maintain an
upright and balanced posture and capacity to withstand
external force and harm. Structure refers to shape, form, and
outline of the building. In the belief that education is primar-
ily concerned with constructing the mind and character of
every child and therefore can ensure the well-being of soci-
ety, students are taken as objects, school as a factory, and the
teacher as machine (T 8), manufacturer (T 11), controller
(T 4), and engineer (T 10), shaping the student into the pre-
scribed mold by strictly following a set of standardized sci-
entific practices. In addition, an increasing demand for a
compliant, faithful, skilled, and knowledgeable workforce
has framed students in a very passive role, where teachers are
portrayed as competitor (T 3), doctor (T 12), judge (T 9),
coach (T 20), strict parent (T 7), and activity designer (T 19),
who have had absolute dominance and implemented rules. In
the above situation, teachers were encouraged to have strict
control over students, and treat students as a standardized
social product rather than a creative individual. The goal of
learning was to shape students into mechanical and passive
individuals, who waited to be led by others into a prescribed
set of skills, knowledge, or values.

Teacher as scaffolder (T 11) suggests a very different edu-
cational building metaphor. The scaffolding, as a temporarily
erected structure used to support a building under construc-
tion, can be gradually removed bit by bit, when the building
itself emerges and grows stronger and more stable. It fits the
neo-Vygotskian metaphor (Karpov, 2005; Vygotsky, 1978),
where the teacher just provides basic structural guidance and
assistance, which is progressively withdrawn as students
move toward mastery of a particular skill or activity. The
scaffolding is constructed by a teacher and later gradually
removed, as the structure of the students’ learning is gradually
built up. This metaphor is now widely used in education.

Educational conduit metaphor. As illustrated above, two of the
most fundamental metaphors of structuring events are the
Object Event-Structure metaphor and the Location Event-
Structure metaphor. Based on the Object Event-Structure
metaphor, English language teaching can be conceptualized
as transmission, which involves the transmitting or deliver-
ing of knowledge to learners, whereas learning can be acquisi-
tion, which involves the acquisition or reception of
knowledge from teachers. This fits what Michael Reddy
(1993) has referred to as the teacher as conduit metaphor,
where the teacher (unidirectional information-giver) puts
ideas (objects) into words (containers) and transmits them
(through a conduit) to a student (information-receptor) who
takes the idea/objects out of the word/containers. In the met-
aphor of teacher as conduit (T 40), the English language is
taken as an object of study, and the language teacher must
exert strong control over both the content and the students,
which is actually an instance of Achieving a Purpose Is
Acquiring an Object, an entailment of the Object Event-
Structure metaphor. The metaphor Achieving a Purpose Is
Acquiring an Object pertains not just to communication, and
to arriving at satisfying interpretations of linguistic forms,
but to any attempt to achieve a purpose. This is in line with
what the conduit metaphor entails. In all of these metaphors,
EFL teachers were compared to conduit (T 10), envoy (T 10),
ambassador (T 11), and repeater (T 9), all considering
the teacher as an information or cultural transmitter who
received text from the instruction or cultural objects than
as a means of communication.

Teachers’ Responses to the Open-Ended
Questionnaire and Interviews

In the open-ended questionnaire, the 20 EFL teachers were
invited to answer the three questions concerning English
teachers, English teaching, and English learning in meta-
phors. The results showed some agreement with respect to
teacher as “instructor,” “director,” “tour guide,” “flintstone,”
“cultural transmitter,” “builder,” “engineer,” and “bridge.”
When asked what was the key role EFL teachers can play, 20
agreed with the “instructor” and “director” metaphors and
indicated that they were their initial belief about the role of
EFL teachers, while 15 insisted on the view that EFL teachers
should be an assistant or tour guide during the English-
teaching-learning process, help the students through the
process, and lead them to a destination. As to the question
regarding the way to conceptualize EFL teachers, 8 assumed
that EFL teachers should be a nurturer and therefore be responsible for taking care of students and facilitating their personal development as a parent, while 9 of them mentioned the necessity of teachers’ responsibility for establishing a bridge and transmitting the English culture to the students.

To investigate how they conceptualized the role of EFL teachers by means of metaphors, 10 EFL teachers were asked to participate in the interview and verbalize every thought that came to mind when the metaphor was generated or selected with a list of five predetermined questions (see Appendix C). All the feedback was recorded and analyzed, the results of which are shown in Table 2.

Table 2. Individual Interview.

| Items | Category | Number |
|-------|----------|--------|
| 1     | Reasons for selecting the metaphors: |        |
| Folk model (very common and basic knowledge) | 10 |
| Educational theory learning (influence from pedagogical learning) | 6 |
| Years of teaching practice and interaction with students | 10 |
| 2     | Other factors: |        |
| Cultural model (long-standing Chinese tradition) | 4 |
| Personal experience | 10 |
| 3     | Focal elements of defining EFL Teachers |        |
| Instructor | 10 |
| Initiator | 6 |
| Knowledge transmitter | 7 |
| Builder | 3 |
| 4     | Choice is consistent with pedagogical behaviors/Yes | 10 |
| 5     | First consideration in implementing teaching practice |        |
| Students | 6 |
| Teaching scheme | 4 |
| Teachers | 0 |

As Table 2 shows, Chinese cultural model, personal learning and teaching experience, and their frame of knowledge were the factors that could determine their choice of metaphors. Besides, their interpretation of the category of EFL teachers was found consistent with the metaphors they generated. To show how they structured the role of EFL in metaphors, the details of interviews with three EFL teachers’ choice of metaphors are outlined below.

**Rong Ou.** Rong Ou has been an EFL teacher for almost 20 years. Her perceptions of EFL teachers were shaped by the following metaphors she used: teacher as instructor, director, and builder. As for the reasons for such choice, she explained that Chinese traditional culture and personal experience could account for it. Rong Ou remarked,

I see myself not only as an instructor and director but also mind builder that was traditionally primary function of teachers. I would instruct and direct my students in the process of English learning. I would be shaping the minds of these “budding” adults. As an instructor, I want to interest my students in English studies, and thus it is very important for me to stimulate their learning motivation. In this case, English teachers should try to show their class in an interesting, and humorous way just like an entertainer does and makes this learning journey more relaxing and pleasant.

**Yingmei Qu.** Yingmei Qu, coauthor of this article, has been an EFL teacher for 15 years. In the interview, she expressed the metaphors of English teacher as instructor, English teacher as tour guide, English teacher as scaffolder, and English teacher as flintstone. She clarified the teacher as the flintstone of the building metaphor in that one of the primary functions for English teachers is to usher students into English learning, provide very basic assistance, and then withdraw after they have established their own structure, which seems to be consistent with what English teacher as scaffold has suggested, a different educational construction metaphor. When asked to explain how she could conceptualize EFL teachers as such, Yingmei Ou remarked:

My perceptions of EFL teachers are manifest on several levels. First, for me, EFL teachers should be responsible for conveying knowledge in various ways and finding the right track for students to reach their targets, just as an instructor or a tour guide behaves, which is [in] line with long-standing Chinese traditions. Second, English teachers should provide basic structural guidance and then ignite their passions for English learning. Similarly, English teachers should withdraw such help later when students have built up their own structure. To this end, I usually link myself to a scaffolder or a flintstone and all the metaphors I have used to structure EFL teachers are out of my personal teaching experience and educational theories.

**Hong Fei.** Hong Fei has been an EFL teacher for almost 25 years. She said that the metaphors she used for defining EFL teachers followed a long-standing tradition of holding teachers
in respect and a traditional view of good teacher. A good teacher in a traditional view has always been expected to work hard at providing professional guidance and, thus, stimulating students’ potential, which is, to a larger extent, dependent on the class the teachers organized. Thus, teacher as organizer and teacher as judge were the two primary metaphors she has generated for the category of EFL teachers. She also said that she did not agree with the teacher as instructor metaphor, and she explained this as follows:

Educational theories I have learnt have influenced me a lot. I see myself as an organizer or judge, rather than an instructor to my students. I don’t want to instruct my students. For a smaller class, I am more willing to be an organizer and make more room for my students. For a larger class, I choose to be a judge, who can not only decide what materials are suitable to students but also decide what strategies students could use to finish the task. Teacher as judge is a reflection of Constructive Metaphor, where teachers, sometimes, have to take total control over teaching materials, methods and molding students, which is quite similar to a judge who rolled a judge, jury and executioner into one in court.

As illustrated above, cultural, societal, and cognitive factors could account for the participants’ selection of the three conceptual metaphors to define EFL teachers. Although there was a discrepancy in their choices, a cluster of four elements such as instructor, initiator, knowledge transmitter, and builder were found to be important for conceptualizing their roles as such.

Cognitive Models

According to Lakoff (1987), any element of a cognitive model can correspond to a conceptual category, which is characterized with its prototype effect. Prototypes are usually considered as the most representative members of a category. In many cases, prototypes act as cognitive reference points of various sorts and form the basis for inferences (Rosch, 1975, 1981). Prototype effect may result from many factors, such as degree of category membership, internal category structure, nature of cognitive models, and so on.

From the responses to both the open-ended questionnaire and the checklist questionnaire, we found that three metaphors—Educational Journey Metaphor, Educational Building Metaphor, and Educational Conduit Metaphor—were involved in defining the category of EFL teachers. As seen in Table 1, the Educational Journey Metaphor was the most prevalent and frequently chosen item (T 147), the Educational Building Metaphor the next most frequently chosen item (T 136), and the Educational Conduit Metaphor was the least frequently chosen item (T 40). It seemed that participants used the three conceptual metaphors, but with a relatively distinct weight, to partially structure the concept of English teacher.

As shown in Table 2, a cluster of four elements were found to be important for defining the category of an English teacher by metaphors. Instructor (T 10), initiator (T 6), knowledge transmitter (T 7), and builder (T 3) are the most important elements of the prototype of an English teacher. The author found that participants, when asked for focal elements of the category of EFL teachers, varied in their choices, some of which seemed to conflict with others. Three participants told the author that sometimes they had a quite different conceptual category of EFL teachers according to the size and type of lessons. For a larger class, they preferred to be a builder and controller, whereas for a smaller one, they chose to be an initiator who just led students in and then provided some instruction. When it comes to what factors could account for their selection among the 26 metaphors, it was found there were many factors such as their basic understanding or knowledge as teachers (T 10), which is referred to as a folk model by cognitive anthropologists, influence from the learning of educational theory (T 6), years of teaching experience (T 10), cultural models (T 4), personal experiences (T 10), and so on. Besides, there was apparent consistency between their use and choice of metaphors and pedagogical behaviors. In total, 10 participants claimed that the metaphors they have selected or generated were more or less in alignment with what they have practiced in their language classroom, consciously or unconsciously. The way they have selected the metaphors also suggested some differences in their first consideration in implementing their teaching practice. A total of 6 out of 10 accepted students as the most important, 4 accepted teaching scheme, and none accepted teachers as their first consideration before they have implemented their teaching practice.

Discussion

The results from the two questionnaires and verbal reports, which indicated the various conceptual metaphors EFL teachers have generated or chosen, converge on a certain prototypical cognitive model of an English teacher. Such a prototypical cognitive model is not restricted to a single model. In fact, it involves a number of cognitive models that combine to form a complex cluster. The cluster is psychologically more basic than the models taken individually (Lakoff, 1987).

At the follow-up interviews, participants’ responses to five predetermined questions suggested that EFL teachers took instructor, initiator, cultural transmitter, and builder as the focal elements of the category of EFL teachers, and this was the reflection of the prototypical cognitive models, which was in line with what they have selected from the 26 metaphors. It can be inferred from their metaphors and follow-up interviews that no single model could cover the full range of EFL teachers. EFL teacher is based on a cluster of models, which can be represented as instructor model, transmitter model, and builder model. In the first model, teachers are usually expected to provide instruction, a role designated by a folk model, where teachers are described as being knowledgeable and, thus, responsible...
for guiding and educating students. In a transmitter model, teachers are often perceived as the knowledgeable individual or master, derived from people’s common knowledge without any technical expertise, and their function is to convey knowledge, such as culture, science, and so on. The builder model is consistent with the long-standing Chinese traditional culture that teachers are soul engineers, and they should build and mold their students’ minds. For the 10 participants who have taught EFL in China for at least 7 years, it became obvious that they usually used a cluster of converging cognitive models with the instructor model as a central model to construct definitions for EFL teachers.

For the reasons why the teachers would conceptualize their roles as such, the cultural and social models of Chinese traditional education should form a part, which is subsequently linked to their personal experiences, self-understanding, and professional role that motivated them to believe in, identify with, and make decisions around the nature of language teaching, language learning, and the language learners in and out of their class. To most of the EFL teachers who were brought up in a Chinese traditional culture, two key aspects of cultural models of language education and teaching are their instructional force as well as their emphasis on social order. In such a model, teachers are usually endowed with a duty to instruct and construct students’ minds and behavior and, therefore, maintain social harmony and stability, where teachers should be a knowledgeable person, social leader, and powerful educator. Such culture has served to reinforce their views on the importance of intellectual and social responsibility teachers should take in language teaching. Thus, it is imperative that language teachers not only guide and instruct students’ learning, but also shape and build their minds to ensure a harmonious society. However, in the development and advancement of educational theory, where attention has been shifted from being teacher-oriented to students-oriented, new attributes have been added for language teachers and the need to inspire students’ full potential has become more prominent and stronger, which may experience some change from the social builder who has committed himself or herself to molding the next generation to a cultural bridge rather than just an instructor.

**Conclusion**

Situated in a Chinese context of EFL teaching, the present study demonstrates that teachers’ cognitive models are, more or less, in line with the metaphors they used or generated, which corresponds with Cameron and Low’s (1999) and Cameron and Malsen’s (2010) claim that metaphor has been used as a research tool to investigate language teacher’s cognition (Cameron & Low, 1999). Following Wan’s (2007) framework on metaphor elicitation, the study achieved the following conclusions.

First, all the metaphors EFL teachers have generated or selected to describe their knowledge, beliefs, and goals on EFL teaching were later categorized into three metaphors: Educational Journey Metaphor, Educational Construction Metaphor, and Educational Conduit Metaphor. As for the factors that determine their selection from 26 metaphors, basic knowledge (folk model), influence from the learning of educational theory, years of teaching experience, cultural models, and personal experiences influenced their choices, among which personal teaching and learning experience were considered the most important.

Second, as far as cognitive models are concerned, the study showed most of us did not have a single coherent understanding of EFL teachers. Instead, we had three converging cognitive models—instructor model, transmitter model, and builder model—each with distinct focal entailments, to structure the category of EFL teachers. The findings showed high consistency between cognitive models and metaphors teachers have generated or selected.

Third, on the basis of the above analysis, we assume that metaphors can actually serve as a useful, effective, and analytic tool for making us more aware of the cognitive model underlying our conceptual framework for EFL teaching. Besides, it can allow us to identify some of the important assumptions we have made in EFL teaching and, therefore, choose to take responsibility for our pedagogical behaviors. By understanding how we structure the category of EFL teachers in terms of metaphors and their associated cognitive models, we can more effectively, critically reflect and evaluate our teaching practice with the purpose of promoting EFL learning.

Last, this research has just been a quantitative study and limited in three aspects. First, metaphor and cognitive models involve a variety of disciplines, such as psychology, biology, cognitive science, sociology, and so on; consequently, they are difficult to categorize. Second, as our study focuses on the participants from only one university, a larger scope of EFL teachers at the same level cannot be investigated; therefore, the findings of the present study are not generalizable.

**Appendix A**

**Open-Ended Questionnaire**

Please complete the following information as required.

1. Your name
2. Educational background: PhD □ MA □ Undergraduate □
3. Current academic title: Professor □ Associate Professor □ Lecturer □ Assistant Lecturer □
4. Years of teaching experience: Less than 5 years □ 5 to 10 years □ More than 10 years □

Please answer the following specific open-ended questions by using metaphors. If you are willing, please provide some simple reasons.
Appendix B

Checklist Questionnaire

Your collaboration is needed to choose from the following 26 sentences that you think can best fit your situation concerning the English language, its teaching and learning in terms of metaphor. You can have multiple choices. If you do not agree with the sentences listed below, please think of a metaphor and complete in your own words.

1. An English teacher is a manufacturer.
2. An English teacher is a competitor.
3. An English teacher is an instructor.
4. An English teacher is a director.
5. An English teacher is a judge.
6. An English teacher is a doctor.
7. An English teacher is a mind-and-behavior controller.
8. An English teacher is a tour guide.
9. An English teacher is a coach.
10. An English teacher is a flintstone.
11. An English teacher is an engineer.
12. An English teacher is a candle.
13. An English teacher is a machine.
14. An English teacher is a conduit.
15. An English teacher is a repeater.
16. An English teacher is a bridge to different cultures.
17. An English teacher is an ambassador.
18. An English teacher is an envoy.
19. An English teacher is a nurturer.
20. An English teacher is a lover.
21. An English teacher is a parent.
22. An English teacher is a scaffoldor.
23. An English teacher is an entertainer.
24. An English teacher is a cook.
25. An English teacher is an activity designer.
26. An English teacher is an acceptor/learning partner.

Appendix C

Individual Interview

1. Why did you choose these metaphors?
2. What other factors determined your choice?
3. Could you give some words or phrases or sentences to define an EFL teacher? What do you usually focus on?
4. Do you think your choice is consistent with your pedagogical behavior?
5. What is your first consideration when you have implemented your teaching practice in a language classroom?

Acknowledgments

The authors would like to express their gratitude to all the participants in this study as well as Southwest Forestry University (China) for providing research funding for the project. Many thanks also go to George Lakoff for his generous encouragement and excellent academic lecture when one of the authors was studying in the Department of Linguistics at the University of California (UC), Berkeley as a visiting scholar.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research and/or authorship of this article: This research was funded by Southwest Forestry University, China.

References

Anderson, J. R., & Lebiere, C. (1998). The atomic components of thought. Mahwah, NJ: Lawrence Erlbaum.
Artzt, A. F., & Thomas, E. A. (2012). A cognitive model for examining teachers’ instructional practice in mathematics: A guide for facilitating teacher reflection. Educational Studies in Mathematics, 40, 211-235.
Bailey, K., & Nunan, D. (1996). Voices from the language classroom: Qualitative research in second language education. New York, NY: Cambridge University Press.
Barsalou, L. (1999). Perceptual symbol systems. Behavioral and Brain Sciences, 22, 577-609.
Borg, S. (2006). Teacher cognition and language education: Research and practice. London, England: Continuum.
Borg, S. (2009). Language teacher cognition. In A. Burns & J. C. Richards (Eds.), The Cambridge guide to second language teacher education (pp. 163-171). New York, NY: Cambridge University Press.
Borg, S. (2011). The impact of in-service teacher education on language teachers’ beliefs. System, 39, 370-380.
Borko, H., & Putnam, R. (1996). Learning to teach. In D. C. Berliner & R. C. Calfee (Eds.), Handbook of educational psychology (pp. 673-708). New York, NY: Macmillan.
Brookfield, S. (1995). Becoming a critically reflective teacher. San Francisco, CA: Jossey-Bass.
Brown, C. A., & Barid, J. (1993). Inside the teacher: Knowledge, beliefs and attitudes. In P. S. Wilson (Ed.), Research ideas for the classroom: High school mathematics (pp. 245-259). New York, NY: Macmillan.
Calderhead, J. (1996). Teachers: Beliefs and knowledge. In D. C. Berliner & R. C. Calfee (Eds.), Handbook of educational psychology (pp. 709-725). New York, NY: Macmillan.
Cameron, L., & Low, G. (1999). Metaphor. Language Teaching, 32, 77-96.
Cameron, L., & Maslen, R. (2010). Metaphor analysis: Research practice in applied linguistics, social sciences and the humanities. London, England: Equinox.
Cheng, A., & Tang, S. (2010). Closing the gap between the theory and practice of teaching: Implications for teacher education.
representation: Challenges to Piaget’s theory (pp. 73-86). Hillsdale, NJ: Lawrence Erlbaum.
Saban, A., & Kocbeker, B. N. (2007). Prospective teachers’ conceptions of teaching and learning revealed through metaphor analysis. Learning and Instruction, 17, 123-139.
Shulman, L. S. (1986a). Paradigms and research programs in the study of teaching: A contemporary perspective. In M. C. Wittrock (Ed.), Handbook of research on teaching (3rd ed., pp. 3-36). New York, NY: Macmillan.
Shulman, L. S. (1986b). Those who understand: Knowledge growth in teaching. Educational Research, 15, 4-14.
Sticht, T. G. (1994). Educational uses of metaphor. In A. Ortony (Ed.), Metaphor and thought (2nd ed., pp. 621-632). New York, NY: Cambridge University Press.
Tobin, K. (1990). Changing metaphors and beliefs: A master switch for teaching? Theory Into Practice, 29, 122-127.
Vygotsky, L. S. (1978). Mind in society. Cambridge, MA: Harvard University Press.
Wan, W. (2007). An examination of metaphorical accounts L2 writers tell about their writing processes (Unpublished master’s thesis). University of York, Heslington, UK.
Zapata, G. C., & Lacorte, M. (2007). Pre-service and in-service instructors’ metaphorical constructions of second language teachers. Foreign Language Annals, 40, 521-534.
Zwaan, R. (2004). The immersed experience: Toward an embodied theory of language comprehension. In B. H. Ross (Ed.), The psychology of learning and motivation (Vol. 44, pp. 35-62). New York, NY: Academic Press.

Author Biographies

Hui Xiong, associate professor, has been an EFL (English as a Foreign Language) teacher for almost 20 years. She likes teaching and feels proud of herself as a teacher as well as an educator. She has developed strong interest in applied linguistics, cognitive linguistics, second language acquisition, and pragmatics.

Lan Li, economic administrator, has been engaged in financial management for 20 years. His research interest is statistics and quantitative research methods.

Yingmei Qu, associate professor, has been an EFL teacher for 15 years. She has a broad interest in cognitive linguistics and functional linguistics.