Do Early Children Learn English in China?—A Study of Early EFL Children's Attitude from Cognitive Perspective through Metaphor Analysis

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Abstract

Researchers can predict future academic development through research on children's behavioral observation and investigation of bilingual learning attitudes and tendencies, but it is difficult to probe the "underlying" cognitive processes of bilingual learning. This study aims to explore the early children's cognitive nature of English language learning, which uses Elicited Metaphor Analysis (EMA) to study Chinese children's attitudes and tendency towards English learning in early childhood. Through the analysis of 736 metaphor texts, it is found that early childhood has a positive attitude towards English learning. The cognitive experience towards English learning of early childhood is derived from their perception and experience, which come from the contact and interaction between themselves and the environment. It can bring out the embodied philosophy thinking of "taken from body nearly and materials far". English learning of early childhood is influenced by native culture, Native language has a transfer effect on English learning. It is recommended that our country, kindergartens and parents support early childhood English learning and development; to clarify early English teaching objectives and improve the quality of early English teaching; develop English and bicultural thinking of early children to prepare for the future security of the country.

Keywords

Early Childhood, English Learning Attitude, Metaphor Study, Cognition

1. Introduction

"Do early children learn English?" This is a hot topic in Chinese society (Zhou, 2004; Li & Yang, 2012; Wu, 2005; Hu, 2018) and also the focus of the international debate on the advantages or disadvantages of bilingual learning for early childhood (Bake, 2007; O. Kocaman & N. Kocaman, 2012; Johnstone, 2009; Li, 2018). In the middle of the last century, early studies of bilingualism found that monolingual children developed better vocabulary and language competence than bilingual children in their native language using IQ tests. Therefore, people were against early children learning foreign languages (Bake, 2011). Some researchers believe that young learners were significantly behind older learners in terms of grammar and vocabulary acquisition, except for acquiring "authentic" accents (Snow, 1978; Harley, 1986). So they suggested that it was appropriate for children to begin to learn English when they were adolescents. Some studies confirmed the best period for children to learn English after the age of seven. The researchers do not recommend that learning English early increases the cognitive burden of children (O. Kocaman & N. Kocaman, 2012). In recent years, studies from brain science and neuroscience have shown that bilingual learning changes the structure of the brain, and bilingual children have cognitive advantages over monolingual children (Chen & Zhou, 2014; Li, & Zhou,

2015; Ka, Lucy, Maria, Twila, & Loulia, 2016; Kuhl, 2007; Cushen & Wiley, 2011). There are significant differences in creative thinking and innovation ability (Lee & Kim, 2011; Leikin, 2012; Shen & Yuan, 2015), which provide strong evidence for early bilingual learning of children. A long-term follow-up study by sociolinguistic researchers has found that children who have learned English at an early age have more opportunities in future career choice and development than children who have not learned English, as well as higher economic and social returns (O. Kocaman & N. Kocaman, 2012; Baker, 2007). That prior evidence supports early childhood learning the English language. In educational policy, the Chinese government does not allow kindergartens to teach children learning English, while English lessons are not included in the kindergarten curriculum (Hu, 2018). However, Chinese parents realize the importance of learning English for their children's future academic development and job hunting. They tend to early children's English learning, nearly a third of parents to send their children to go to institutions to learn English (Zhou et al., 2014; Xia, 2015; Leopard, 2016). Besides, few studies have focused on early childhood English education in existing research at home and abroad, most of the discussion of early childhood bilingual learning stand in the perspective of the researchers, parents, and other adults to think and answer, there is little the tendency of early children's attitude toward English learning, participation, and discussion. It is difficult to explore the "subconscious" attitude and concept in children's deep thinking by using quantitative research methods such as scale and survey, to study the behavioral representation of children's English learning in the early stage (Jin & Cortazzi, 2011). This article, based on the subjectivity of children, used Elicited Metaphor Analysis (EMA) to dig into children's "subconscious" experiences and experiences of English learning from the perspective of children. Research has discovered the nature of the attitudes and tendencies of early childhood English learning, revealing the nature of early English learning. This article studies the main issues:

1. What attitudes and tendencies do early children have towards English learning?

2. What are the characteristics of cognitive function of early children's English learning attitudes from metaphor analysis?

These questions intend to gather information constructing an empirical foundation for the subsequent development of early childhood bilingual ability and thinking, and also provide a reference for teacher training and textbook compilation.

1.1. Language learning attitude

The expression language learning attitude refers to learners' persistence in pursuing the goal of language fluency and reflects the degree of their positive or negative emotions concerning learning the target language (Edwards, 1941; Gardner, Smythe, Clement, & Gliksmann, 1976; Hu, Zhou, & Jin, 2018). In other words, language learning attitude is a state of preparation of students' behavioral deviation or internal response to second language learning and its learning context, which is a state of preparation for learners' positive or negative tendencies of reflection towards second language learning (Li & Zou, 2009; Qu, 2014). These attitudes reflect learners' tendencies, expectations, and demands for second language learning and are influenced by interest, belief, and motivation. Rosenberg and Hovland (1960) divided learning attitude into three dimensions: cognitive level, affective experience, and behavioral tendency. Qu (2014) and Tang et al. (2017) believed that students' bilingual learning attitudes were composed of cognition, affection, and behavior. Based on the three-dimensional theory of attitude, the current study enhances the definition of children's language learning attitude. Specifically, pre-school children aged 4 to 6 are psychologically prepared to learn languages, to have emotional experiences such as expectations and preferences, and to show positive or negative behavioral tendencies.

The international research on attitude towards language learning mainly employs questionnaires, interviews, observations, self-made scales, and other direct investigatory methods. Children's answers and self-evaluations have been obtained through interviews and scales of the subjects (Albarracin & Shavitt, 2018; Baker, 1992). For example, Gardner (1985) divided children's language learning motivation and attitude into two categories: an integrated attitude and an instrumental attitude, asserting that learners have an instrumental language view and a comprehensive language view on bilingual learning. Learners have different language learning objectives, methods, and strategies (Baker, 2014). The Attitude/Motivation Test Battery, compiled by Gardner (1985), has high reliability and validity and is commonly used in international research. From the perspective of social culture, Gao et al. (2003) found that language learning motivation and attitude are divided into an intrinsic interest type, an achievement type, a situation type, a going-abroad type, a social responsibility type, a personal development type, and an information media type, all of which are related to whether the learners choose high salary jobs with English in future career choices, accept the culture of English-speaking countries and have the ability of intercultural communication with persons from different countries.

However, these studies were based on behavioral observation, such as questionnaire and scale survey, from which it is difficult to detect the learners' deep mental attitudes and values. Such quantitative methods are not suitable for

pre-school children because such children do not have language skills that are high enough developed to describe past experiences and feelings directly. Therefore, the researchers adopted an indirect investigation method—the metaphor analysis method (Jin & Cortazzi, 2011; Hu, 2018; Jin et al., 2015; Su, 2016; Zhao, 2016). EMA is based on the notion that metaphor as a tool of cognition bridges between language and thought.

Researchers globally have found that the metaphor analysis method could be used to extract children's attitudes towards language learning. For example, Jin et al. (2014) successfully applied metaphor analysis to the study of Chinese pupils' language learning attitude and motivation. They believed that the metaphorical analysis method was well suited to the research on language learning attitudes in children in early childhood. They conducted an interview concerning pupils' attitudes towards learning English in Chinese primary schools. Their research found that children liked to learn English and had a positive learning attitude towards the process. The study used several revelatory methods, such as cards, story pictures, games, cartoons, pictures, and role-playing, which could effectively trigger children's association with materials in early childhood. Jin (2014) divided the early bilingual learning attitudes into four categories: positive, negative, neutral, and ambiguous, reflecting the positive and negative feelings of learners towards English language learning and highlighting the importance of culture, emotion, and cognition in early learning. Hu (2018) explored the attitudes and tendencies of pre-school children towards the learning of English, finding that metaphor could help children build a bridge between language and thinking and reveal their inner orientation and value judgment about learning English. Pre-school children were willing to learn English and liked to be Chinese-English bilingualism in the early stage of English learning. Zhao (2016) analyzed the attitudes of pre-school children in Shanghai towards learning English using metaphor analysis and found that children tended to use positive metaphors to express their attitudes towards learning English, which, described from the perspective of their experience, were happiness and liking at the emotional level and learning activities at the behavioral level. Sun (2016) analyzed the Uyghur language and learning attitudes of ethnic minority children towards learning Mandarin. She found that ethnic minority children held a positive attitude towards learning Mandarin but reported no significant differences in the attitudes of children across different ages. The children believed that learning the minority language was as important as learning Chinese. Therefore, it was concluded that metaphor analysis can be a vital research methodology for studying pre-school children's attitudes towards learning a second language.

In general, metaphorical analysis of attitudes in children learning a language is affected by family, society, and institutions. Children's psychological preparation and their penchant for learning a language reflect their affective experiences, such as their preferences, interests, and intentions, and show their active positive or negative behavioral tendencies regarding learning.

1.2. Piaget's cognitive theory

Piaget (1980) believed that the cognitive structure of humans is always reconstructed during interaction with the environment throughout a series of qualitative stages that define the individual's life. He claimed four stages of human development. The first—the sensorimotor stage (ages 0-2)—is one in which children mainly acquire action experience by their exploring the relationship between sensory perception and movement in cognitive activities. Through these activities, some low-level behavioral schemata are formed to adapt to the external environment and to explore the external environment further. The second—pre-operational stage (ages 2-7)—is a stage where children's operation is an internalized intelligence or operation. In the pre-operational stage, children's language and concepts develop rapidly. Their sensorimotor behavior patterns have been internalized into the representation or image pattern, which are associated with physical objects and have symbolic functions. Children ages 2-7 can start to use language or relatively abstract symbols to represent the things they have experienced. The third—concrete operational stage (ages 7-11)—is one where children in the concrete operational stage begin to receive school education and enjoy significant cognitive development. In this stage, children's thinking has some elasticity. They can think logically and can organize by relying on real things or representations obtained from particular things, but they cannot think abstractly. The fourth—formal operational stage (ages 11 years to adult)—is a stage where individual reasoning ability develops and improves and where teenagers can think about abstract nature from multiple dimensions. They can also engage in hypothetical thinking and use logical reasoning, induction, or deduction to solve problems. They can understand the meaning of symbols, metaphors, and similes and can make certain generalizations. At this stage, their thought processes approach the level of ordinary human adults.

The participants in this study were children aged 4-6 years, whose cognitive development was in the pre-operational stage. Their thinking developed to the stage of directed thought and autistic thinking, and their egocentric thought was in the intermediate state. At this time, children have images associated with words in their minds, such as food and ani-

mals. They also have concepts such as life, thoughts, emotions, and other images associated with them (Piaget, 1980). They have a qualitative sense of life and feeling according to the ideas of plants, animals, and planets. In other words, children use their bodies to interact with the world around them and acquire the perception of movement patterns, which are internalized into representations or images (Piaget, 1980; Hu, Zhou, & Jin, 2018; Hu, 2018; Wang, 2002; Wang, 2009). These representations or images have symbolic functions. In children's brains, representations or images are connected with experience to form semantic concepts. Children can use complex language or symbols to represent the things they have experienced and express their inner feelings and tendencies. At the same time, the transition state of children's egocentrism is different from that of socialization. Children's minds jump directly from the premise to the conclusion in a pure intuition without any intermediate deduction steps (Lakoff & Johnson, 1980; Lakoff & Johnson, 1999; Wang, 2002; Wang, 2009; OECD, 2014). As for the "why" explanation in the causal relationship, children have non-reasoning natures that rely on self-experience, feeling, movement, and other cognition and are rarely limited by custom, convention, and other norms (Piaget, 1980).

2. Methodology and Materials

2.1. Participants

2.1.1. Region selected

This study selected three cities: Shanghai represented developed areas, Mudanjiang represented remote areas and Changzhou represented coastal developmental areas.

2.1.2. Selected kindergartens

This study selected ten kindergartens in Shanghai, Mudanjiang, and Changzhou based on the principle of "convenience sampling", the selection represented kindergartens of different areas and quality, including six public kindergartens and four private kindergartens. Ten kindergartens did not offer bilingual courses. Seven kindergartens established bilingual environments in local areas, and three kindergartens did not establish any bilingual context, as shown in Table 1.

Table 1. Statistics of Sampled Kindergartens in Shanghai, Mudanjiang and Changzhou

	Items	Shanghai	Mudanjiang	Changzhou
Position	City	2	2	2
	Suburb	1	1	2
	Model	0	1	1
Kindergarten Level	First Class	3	0	1
	Second Class	0	2	2

2.1.3. Participants

Two hundred forty-three children including 121 boys and 122 girls, ages 4-6 years, were randomly selected in three cities according to urban and rural regions and school levels. The participants were asked to have normal IQ, sound limbs, no appearance disability, clear mouth, and fluent language. The children's intelligence quotient in three regions had no significant differences based upon the kindergartens' IQ test for enrollment. Children's SES had no significant differences.

This study was conducted subject to the ethical review of the sponsoring university. After the participants' kindergarten principals, teachers, and the children's guardians became aware of the study and signed informed consent, the study followed the principle of confidentiality. The names of the children were kept confidential and were numerically coded by ten interviewers, and all interviewers promised not to disclose the interview content and research information. After each interviewer, children were given gifts as a reward for participation.

2.2. Methodology

The study adopted a mixed-method model to provide inspiring materials to the children for guiding them to tell their feelings and preferences about learning English. Based on the corpus collected of the metaphorical structures of "learning English is like____, because____.", from the interviews, the researcher conducted quantitative statistics and qualitative analysis on the same text simultaneously and explored the children's "subconscious" attitude and experience towards learning English, revealing the inherent cognitive nature through metaphorical similarity in early bilingual

learning (Hu, 2018; Hu, Zhou, & Jin, 2018; Jin et al., 2015). The research adopted qualitative and quantitative methods to overcome the limitations of a single research method, to improve the reliability and validity of the research, and to make the study more consequential and practical (Creswell & Clark, 2017; Hu, 2018).

2.2.1. Elicited metaphor analysis (EMA)

EMA was based on theories from the domain of cognitive linguistics, which regards metaphor as a cognitive tool that bridges the language and thought (Lakoff & Johnson, 1980; Lakoff, & Tuner, 1989; Wang, 2002; Wang, 2009). With the help of discourse text analysis, EMA introduces thinking inside the brain, embodies personal values, and represents the philosophy of “taken from the body near and materials far”, EMA uses cards, picture stories, games, drawing, and other means to obtain cognitive and emotional information from children during early childhood (Hu, 2018; Hu, Zhou, & Jin, 2018; Jin et al., 2015; Zhao, 2016). It determines children’s evaluation of their learning experiences and helps researchers explore and analyze their learning attitudes. It can overcome the disadvantages of traditional quantitative research, go into the deep thinking of children during early childhood, and extract previous experiences and the sub-conscious attitudes towards the learning of English.

The level of cognitive development in children aged 4-6 years was taken into account in the study. Their “subconscious” judgments of causality focused on the content of the language rather than its form (Piaget, 1980). Therefore, pictures, objects, and other materials induced pre-school children to say structures like “learning English is like ____, because ____.”, to express their attitude towards learning English. EMA text analysis requires three elements: target domain, source domain, and entailment (Hu, 2018; Hu, Zhou, & Jin, 2018; Jin et al., 2015; Zhao, 2016; Sun, 2016). The structure of “Learning English is like ____, because ____.”, provides the metaphor and entailments for EMA. For example: “Learning English is like apples because apples are sweet. Eating apples every day is good for our health”, see Table 2 for the EMA analysis framework.

Table 2. EMA Analysis Frameworks

Elements	Characteristics	Metaphor	Examples
Target domain	Subject	Ontology	“Learning” concept: Learning English
Source domain	Object	Metaphors	Apples
Entailment	Explaining	Reason	Because apples are sweet. Eating apples every day is good for our health.

Jin (2014) classified metaphorical attitudes into four categories: positive, neutral, negative, and unexplained. The “entailment” in the metaphorical structure of attitude was encoded and classified. Table 3 shows the specific standards and corpus.

According to Linnaeus’ taxonomy for naming organisms, the metaphors of attitude structure were coded and classified. Table 4 shows specific categories, standards, and corpus.

2.2.2. Children’s questionnaire

Based on the British Council approved project Children’s English Learning Motivation and Attitude Scale and Likert’s five-point attitude scale, the study was localized and compiled into “A Questionnaire on Children’s Attitude and Experience towards Learning English in Urban and Rural China” (Jin et al., 2014; Jin et al., 2015). A Comparison between Chinese and English versions—three pilot tests and modifications to them—was reviewed by Chinese and British project experts, and the reliability and validity were found to have met the research requirements. The questionnaire consisted of four sections: family background, views towards the English language, views towards English learning, and English learning behavior. It consisted of 40 questions distributed in three parts: basic personal information about early childhood, children’s language learning experience, and attitude towards learning English. The survey focused on the socioeconomic status (SES) of early childhood families, English language learning environment, English learning methods of early childhood, and attitudes towards learning, which would provide quantitative data for the study of early childhood attitudes towards learning English.

The first part elicits pre-school children’s personal basic information via questions 1 through 8. The second part questions the early childhood English learning experience, with questions 9 through 22. The third part inquires as to the early childhood bilingual learning attitude, with questions 23 through 40.

Two hundred forty-three questionnaires were distributed and recovered; the recovery rate was 100%. Two hundred forty-three questionnaires were valid, giving an effective rate of 98.12%. The questionnaire was analyzed and revealed a Cronbach’s alpha, indicating that the questionnaire was of high quality and reliability.

Table 3. Classification Standard for EMA English Learning Attitude

No.	Categories	Metaphors	Standard	Corpus
1	Positive attitude	Animal Fruit Goods	Children have positive emotions and can actively learn English.	1. Learning English is like a little white rabbit, because the little white rabbit is white, lovely. I want to keep it. 2. Learning English is like a banana, because it is sweet and delicious. I like it. 3. Learning English is like a bed, because it is comfortable.
2	Neutral attitude	Goods Shape	Children have neither positive nor negative attitude and learn English step by step.	1. Learning English is like a Christmas tree, because Christmas trees are foreign. 2. Learning English is like a loaf of bread, because it looks like an L.
3	Negative attitude	Shapes Animal	Children have negative emotions and learn English passively and languidly.	1. Triangle bread has no taste, just like learning English is very dull. 2. Learning English is like bitter gourd, very bitter, very bad. 3. The tiger is lovely, but I dare not touch it.
4	Unexplained attitude	Food Animal	Children tell things that have nothing to do with metaphors.	1. Learn English is like a leaf, because the dandelion is blown away. 2. Learning English is like a tiger, because pandas like eating bamboo.

Table 4. Metaphors Classification Standards of EMA English Learning Attitude

No.	Categories	Standards	Corpus
1	Food	Edible things that can provide energy for a human being in nature. Constitutes essential material of living organisms.	Learning English is like an apple, because an apple is good for health, we should eat it every day.
2	Animal	An organism that can move and acquire food and energy from the outside world.	Learning English is like a small white rabbit, because of the lovely, I like it.
3	Plant	A living organism that is unable to exercise, synthetic nutrients, supply nutrition organisms to itself.	Learning English is like a leaf, because the leaf is too complicated.
4	Character	Human or part of a human being	Learning English is like dad, because dad said Mandarin.
5	Activity	The dynamic process of external behavior or development of life.	Learning English is like climbing a mountain, because you have to climb it step by step.
6	Goods	Tools of human invention and creation can achieve some specific functions.	Learning English is like a cup, because we can drink water from the cup.
7	Shape	The external features of objects show a specific spatial or planar structure.	Learning English is like a heart, because we like it.
8	Others	Other things that do not meet the above classification criteria.	Learning English is like a star, because it twinkles in the sky.

2.3. Corpus collection and analysis

The researcher designed the semi-structured interview outline according to the questions and actual research needs. The testers went into the kindergartens without interfering with the regular teaching and life in the preschools. They released the materials in strict accordance with the requirements of the research operation manual, conducted guided

interviews with the children, re-recorded the data to NVIVO 11.0, and labeled the interviews with valid coding. Based on the four classifications of Jin's (2014) attitude (positive, negative, neutral, and unexplained attitude), this research studied and processed the text and summarized and constructed the theoretical framework. Two researchers performed the coding and classification of the text independently. In the case of non-interference, the research compared the coding consistency, and the result was inter-rater reliability =98% and Cohen's Kappa=0.96 for classification reliability.

2.4. Metaphor data, the validity and the reality of inspection

This study adopted EMA to extract attitudinal information from early childhood. To avoid the interference of pictures, objects, and other materials, the researchers input the interview content and questionnaire results of 243 children into SPSS22.0 software. After attitude stability analysis, Table 5 showed the resulting data.

Table 5. Descriptive Statistics and Correlation Analysis of Metaphor Learning Attitudes and Questionnaire Attitudes among Early Children in China

		Questionnaire Attitude	Metaphor Learning Attitude
Questionnaire Attitude	Correlation Coefficient	1.000	
	Significance (double-tailed)	.	
	N	243	
Spearman's rho	Correlation Coefficient	0.152*	1.000
	Significance (double-tailed)	0.022	.
	N	243	243

Note. * $P < 0.05$

As shown in Table 5, the Spearman Correlation Coefficient $r=0.152$, $P=0.022 < 0.05$, and the correlation is significant in the stability test of metaphor analysis for early English learning attitudes and questionnaire attitudes. From the perspective of metaphor, the study of early children's attitudes towards learning English had excellent stability and met the requirements of the project.

3. Findings and Discussion

3.1. Early children's attitude towards learning English

The research surveyed two hundred forty-three early children in China and collected 850 metaphors of English learning attitude, including 736 useful metaphors, and the effective rate was 86.6%. The metaphorical text "learning English is like ____ because ____", was encoded, according to the four classification criteria based on Jin's (2014) metaphor attitude. The summary of the statistical results is shown in Figure 1 and Table 6.

Figure 1. Distribution of Metaphorical Learning Attitudes of Early Children in China.

Table 6. Statistical tables of metaphorical learning attitudes in early childhood

No.	Categories	Number	Percentage	Metaphor	Standards	Corpus
1	Positive attitude	370	50.3%	Animal Fruit	Positive, positive emotion, can actively learn English.	1. Learning English is like a banana, because it is sweet and delicious, I like it. 2. Learning English is like a little white rabbit, because the little white rabbit is white and lovely, I want to raise it. 3. Learning English is like a bed, because I'm lying on it is very comfortable.
2	Negative attitude	98	13.3%	Shape animals	Negative, negative emotion, passive, slack learning English.	1. Triangular bread has no taste, just like learning English is boring. 2. Learning English is like bitter gourd, very bitter, very bad. 3. The tiger is lovely, but dare not touch it.
3	Neutral attitude	223	30.3%	Shape of article	Not positive, not negative, neutral attitude, step by step to learn English.	1. Learning English is like a Christmas tree, because the Christmas tree is foreign. 2. Learning English is like a long bread, because it looks like "L".
4	Unexplained attitude	45	6.1%	Food animals	Early children tell things that have nothing to do with the metaphor.	1. Learning English is like a leaf, because dandelion blows away. 2. Learning English is like a tiger, because pandas like to eat bamboo.

Figure 1 shows the distribution of English metaphor learning attitudes in early childhood; Table 6 shows the number and examples of various classifications of attitudes. There are 370 metaphors of positive attitudes, accounting for more than half of the total. Children use positive words like hope, comfort, and other positive words to describe their attitudes and emotions towards English learning; Secondly, there are 223 metaphors of neutral attitudes, which is less than one-third of the total. They described the facts and behaviors of English learning with narrative language, but children were hard to clearly explain their personal "subconscious" experiences in the limitations of their cognitive or language development. As children grow and mature, their learning attitudes may change to negative or positive attitudes; then, there are 98 metaphors of negative attitudes, which are children's negative emotions such as fear, fear, and aversion to English learning; Finally, there are 45 metaphors of unexplained attitudes, which account for a small proportion, mainly due to the lack of connection between the text content and English learning attitudes. On the one hand, children do not understand the interview question what they need to answer; on the other hand, affected by cognition, children affected by cognition do not know how to describe their attitudes towards English learning.

3.2. Cognitive Function of Metaphorical Learning Attitude in Early Childhood

A metaphor is a concrete object and image, which is the visualization of abstract concepts to help people understand, recognize the concept of invisible or intention (Lakoff & Johnson, 1980; Lakoff & Tuner, 1989; Su, 2000). The cognitive level of 4-6 years old children is in the pre-operation stage, and the cognitive development of causality is concerned (Piaget, 1980). However, the concept of "English learning" has not been formed, the metaphor can effectively implement the concept of "English learning" to explore the early childhood thinking mode from the image, and reveal the cognitive development mechanism from the "subconscious" experiences (Jin et al., 2014). 736 effective metaphors interviewed from 243 children were collected and divided into eight categories by Linnaeus natural classification method, as shown in Figure 2.

Figure 2. Distribution of Metaphorical Attitude towards English Learning in Early Children.

Figure 2 shows the distribution of metaphors classification of learning attitude. The number of food metaphors is the largest. Then, it is a metaphor for animals, shapes, and activities. Finally, there are plants, objects, characters, and other categories. The cognitive function of the mapping and contrasting attitude between metaphor and ontology in EMA is as follows (see Table 7).

Table 7. Cognitive Function of Metaphorical Learning Attitude in Food English

Classification	Metaphor	Entailments	Cognitive function
Food	Bread	Because English is soon to learn well, so choose this thing.	Knowledge acquisition
	Apple	Because eating apples is good for your health, eat them every day.	

Food metaphors: the importance of knowledge acquisition— nutrition, absorption

As shown in Table 7, there are 323 food metaphors, accounting for 43.9% of the total number of metaphors, which is close to half of the total items, involving common food such as apples, bananas, watermelons, bread, biscuits, and other fruits in life. Early children use these food metaphors to explain nutrition, absorption constitutes the material basis for children's growth, reflecting the importance of acquiring English knowledge, such as: *eating apples is good for the body, so eat it every day; watermelon is sweet and cold, and eat it every day in summer; I know apple vocabulary and I will learn it soon*. Most food metaphors reflect children's positive learning attitude.

Table 8. Description of Cognitive Function of Metaphorical Learning Attitude in Animal English

Classification	Metaphor	Entailments	Cognitive function
Animals	White Rabbit	Because some rabbits are fat, the letters are round.	Learning experience
	Monkey	Because monkeys can climb trees, very strong.	

Animal Metaphor: Accumulation—Experience and Feeling of Learning Experience

As shown in Table 8 the number of animal metaphors is 160, including tigers, rabbits, elephants, monkeys, pandas, and other animals. Early children's expressions of animal metaphors are mainly derived from daily life experiences and feelings, forming different learning attitudes. For example: *“Learning English is like a tiger, because the tiger is very strong, and can climb trees; Learning English is like a white rabbit because the rabbit is cute; Learning English is like an elephant because the elephant is tall, big, and strong.”* It shows that children are good at language learning, they have a preliminary understanding of language learning, accumulate relevant experience, and present a positive attitude. At the same time, children are affected by the outside world or themselves and show negative and negative emotions towards language learning. *“Learning English is like a tiger because the tiger is fierce and afraid; Learning English is like a panda because pandas are rare and uncommon.”* Those examples illustrate that children's fearful and nervous learning experiences. There are also a few children who describe animal metaphors to show facts rather than ambiguous learning attitudes.

Table 9. Description of Cognitive Function of Metaphorical Learning Attitude in Plant English

Classification	Metaphor	Entailments	Cognitive function
Plants	Big tree	Because the big tree is tall and cool.	Learning environment
	Leaf leaves	Because I feel (English) some things like the shape of leaves, but also some content.	

A Plant Metaphor: Diversity of Learning Environment—Atmosphere, Rendering

As shown in Table 9, there are 43 plant metaphors, including big trees, dandelions, bamboo, and other plants. Most of the entailment is focused on the language environment, such as “*Learning English like a big tree, because the big tree is very high, and there are shade trees to cool; Learning English is like dandelion because a blow dandelion is scattered.*” Children interact with the learning environment to get happy experiences and show a positive learning attitude.

Table 10. Description of Cognitive Function of Metaphorical Learning Attitude of People in English

Classification	Metaphor	Entailments	Cognitive function
Characters	Foreigners	Because foreigners are different from us.	Identification
	Barbie	Because Barbie has yellow hair and is beautiful.	

Character Metaphor: the Sensitivity of Identity Recognition—Differences

As shown in Table 10, there are 20 character metaphors. Those metaphors are characters such as foreigners, Barbie, and Ultraman, which are different from the people who often come into contact with children and meet their people. The entailment for explanation: “*Learn English is like foreigners, because English is spoken by foreigners, they are different from us; Learn English is like Barbie because Barbie has yellow hair.*” Early children were sensitive to the differences between their mother tongues and English, knew what differences in two languages, and show strong identification and self-identity (Kearney & Barbour, 2015). Children’s attitudes towards English learning is divided into two levels, either for the positive attitude of tolerance and acceptance, such as “*Learning English is like Altman because he is a foreigner, I am going to play abroad*”; or for the negative attitude of rejection, isolation, such as “*learning English is like Santa Claus, because he is foreign and isolated from us*”. This kind of language generated by identification may have a corresponding impact on children’s future English learning.

Table 11. Description of Cognitive Function of Metaphorical Learning Attitude in English

Classification	Metaphor	Entailments	Cognitive function
Goods	Cup	Because the cup is used to drink water.	Language use
	Bedding	Because my mother is lying in bed reading English books, very comfortable.	

Goods metaphor: the purpose of language use—communication, tools

As shown in Table 11, there are 43 goods metaphors and the metaphors are mainly cups, beds, skirts, clothes, and other daily necessities. Children interpret these goods emphasizing their functions and roles, which is reflecting the cognitive function of language use purpose. Such as “*Learning English is like a cup, because it can drink water; Learning English is like a skirt because it is beautiful.*” When children use goods metaphors, they think English is a tool to help people achieve their goals and play a role in communication. So far, early children’s attitude towards English learning shows a positive attitude.

Table 12. Description of Cognitive Function of Active English Metaphorical Learning Attitude

Classification	Metaphor	Entailments	Cognitive function
Activities	Mountain climbing	Because climbing a mountain takes a step up.	Language skills
	Bicycling	As soon as he pedaled on his bike, he went on.	

Activity metaphors: proficiency— practice in language skills

As shown in Table 12, there are 59 activity metaphors. The metaphors are mainly climbing a mountain, riding the bicycle, going to the casino, playing games, and other activities. It is a type of behavior that children often participate in or practice more frequently. This type of metaphor is more often seen in the results of foreign language learning research (Kramsch, 2003; Lu & Liu, 2013; Wang & Xu, 2006). Children compare English learning to a metaphor for ac-

tivities, such as “*climbing and riding a bicycle*”. The entailment is that climbing a mountain requires climbing step by step (Jin & Cortazzi, 2011). If you ride a bicycle, you have to ride forward. That metaphor indicates that language skills in English learning need to be practiced and practiced constantly. Simply mastering knowledge is far from enough, and these skills need to be practiced step by step. Starting with basic language skills, strengthen the use of language skills to achieve proficiency level. Children’s attitude towards English learning will also gradually improve with positive emotions.

Table 13. Description of Cognitive Function of Metaphorical Learning Attitude in Shape-Like English

Classification	Metaphor	Entailments	Cognitive function
Shape and Color	Round round	Because I like circles.	Emotional factors
	Conch shape	Because it looks good, I like it.	

Shape and Color Metaphor: Preference of Emotional Factors—Preference, Boredom

As shown in Table 13, there are 64 metaphors of shape and color. The metaphors are mainly red, black, white, yellow, and other colors and pentagonal, star shape. Through the senses, children acquire the sense and perception of color and shape, reflect their preferences for English learning, disgust, and other emotions, and show positive and negative attitudes. For example: “*Learn English is like red because red is warm; Learn English is like black because I do not like black; Learn English is like snails because it feels soft.*” Children are influenced by local culture, and their color preference will also affect their standpoint in English learning.

4. Conclusions and Suggestions

4.1. Conclusions

This article uses elicited metaphors to analyze early children’s English learning attitudes and reveals the cognitive mechanism of young learners’ foreign language learning. The study found out the basic characteristics of early children’s foreign language learning. Especially early children provide attitude metaphors and rich metaphorical data, which help researchers to in-depth explore the thinking and attitudes of early childhood. This research method is more enlightening than standard interviews and questionnaires (Jin et al., 2014).

4.1.1. Early Children’s Attitudes toward English Language Learning

From the number of metaphors with a high proportion of positive attitudes, the study found that early children love and like English learning. A metaphorical analysis of positive attitudes to English learning is directly related to children’s preferences and perceptions. There are foods that children love to eat, animals and interesting things, such as “*watermelon, banana, apple*” and *other sweet fruit*”, White Rabbit, Panda, Monkey “*cute animals*”, “*going to the playground, boating, and playing games*” entertainment activities bring early children the perception of “*delicious, good-looking, fun*” and produce a pleasant, happy and comfortable experiences. Nearly one-third of the number of metaphors shows that early children are aware of the difficulty of foreign language learning, and their negative learning attitudes are related to their experiences of loneliness and disgust, such as bitter, sour, and spicy foods, such as “*bitter gourd, grapefruit and pepper*”, fierce and majestic animals such as “*tiger, elephant*”. Early children feel fear, resistance, and store negative learning experience of “*bitter, difficult and afraid*”. Some early children have a neutral learning attitude, such as “*I know the words of apple; Mom and Dad are tigers; Panda is white and black.*” These years young learners say that they are happening around them, and they are real. Although there is no obvious positive or negative vocabulary expression, they use neutral language calmly to explain the reason why they have accepted English learning. This is not another positive attitude. Analyzing 736 metaphors of English learning attitudes, we can also see that early children pay attention to themselves and what happens around them in their daily lives, such as “*I like, I am afraid; I want to raise rabbits; I want to eat apples every day.*” These metaphors are related to children’s living environment and experiences. The interpretation of metaphor categories from the inside out, near and far, is consistent with Lakoff’s (1999) embodied philosophy: “Metaphor starts from the experience of daily life and has the characteristics of close and distant objects”. The metaphor classification is similar to the results of a survey of pupils’ English learning motivation conducted by Jin (2014). However, early children rarely mention teachers, peers, schools, and other people or things away from children.

4.1.2. The Essence of Early Children Learning English Language

From the perspective of language learning, the metaphors of English learning attitude maps seven cognitive functions: knowledge acquisition, language use, language environment, learning experience, identity recognition, language skills,

and emotional factors. Excavating the inner “subconscious” of early childhood in-depth shows that they already have phonological awareness, can distinguish the pronunciation of their mother tongue and English, judge the similarities and differences in two languages, and complete the cognitive processing process of identity recognition. For example: “*Foreigners speak English, we speak Mandarin; Apple is an apple, a monkey is a monkey*”. They think a language is a communicational tool, and the function of language determines the continuous use of language to improve proficiency. For example: “*A cup can be filled with water, and you have to drink water every day; You must climb a mountain step by step*”. Early children also realized the importance of acquiring declarative knowledge such as words, phonetics, and grammar, but they thought that foreign language learning needed Input of procedural knowledge, such as listening and speaking. They were willing to imitate and practice. For example: “*Monkey can speak English, then it learns a word and speak a word; an elephant can speak English*”. This kind of knowledge and understanding conforms to the learning of knowledge and skills in information processing theory (Lu & Liu, 2013). Also, early children’s likes, dislikes, interests, and other emotional components have an impact on foreign language learning. Emotion encourages them to intervene in foreign language learning. They have a cheerful and positive feeling for the social environment of English learning. On the contrary, emotion hinders foreign language learning, they show negative feelings of hatred. For example: “*learning English is like watermelon because watermelon is difficult to cut like a foreign language is difficult to learn; bitter melon is bitter, so English is not easy to learn*”. There are also some early children to overcome negative emotional interference and insist on learning English. For example: “*Bitter melon is bitter, and good for the body, just like learning English; the whole watermelon is cut with a knife and cut open.*” After discovering the problem, adjust the learning methods and strategies in time to solve the problem and make the early children’s cognitive development mature.

4.1.3. The Influence of Chinese Culture on Early Childhood

Metaphor builds a bridge of language and thinking and is influenced by social circumstances (Liu, 2004; Wang & Liu, 2003). Through metaphor analysis, we can find out the cultural differences of learners’ foreign language learning concepts (Lu & Liu, 2013). Influenced by the living environment, family, and community of early childhood, the eight types of metaphors related to English learning were unbalanced distributed in the study. This study collected 323 food metaphors, covering about 28 kinds of fruits, vegetables, bread, and desserts. These large numbers and a rich variety of food metaphors reveal the Chinese cultural characteristics of “*hunger breeds discontentment*” in early children’s English learning in China. The taste, shape, structure, and characteristic information of various foods leave cultural traces in the brain through sensory organs to build children’s unique learning experience (Rogoff, 2003). Then, the interaction of these stored learning experiences and the external environment helps children develop Potential and hopeful goals. “*Learning English is like red because red is warm; Learning English is like a panda because the panda is a national treasure, rare and uncommon.*” Early children’s recognition of red and a panda highlights Chinese cultural representations. Starting from Chinese culture, the participants interpret the cultural symbol of color and animals in English. “*Red is comfortable and positive emotion; A panda is rare.*”, but in western culture, red represents evil and ugliness; a panda is an animal. The metaphorical meaning is different, revealing that early children’s English learning is influenced by the migration of Chinese culture (Trang Thi Thuy Nguyen, 2016). There has been a deviation in understanding English culture, which objectively reflects the need to continue to develop cognitive functions of memory, analogy, association, and association in early children’s English learning.

4.2. Educational Suggestions

This study found the attitudes and tendencies of early children towards English from the previous research, as well as the cognitive mechanism of English learning. We have suggestions for bilingual education for early childhood in the future are as follows:

4.2.1. Supporting Early Children to Learn the English Language

Early children can learn the English language. Early bilingual learning not only promotes children’s cognitive development but also reduces the incidence of poverty and maintains social stability in the future. In November 2016, the United States government issued the “Policy Statement on Supporting the Development of Children Who Are Dual Language Learners in Early Childhood Programs”. The state-funded the support of early bilingual learning for children aged 0-5 to prepare for national security (U.S.DHHS, U.S.DE., 2016). In the gradual formation of the global village, the Chinese government needs to fully understand the importance of training foreign language talents. Thus, we should call on the national government to issue relevant regulations and policies as soon as possible to allow early children to carry out English learning promptly when conditions are available and do not affect the development of their mother tongue; we hope that the kindergarten is open to early children’s English learning Attitudes, English learning content is allowed to be appropriately added to the curriculum content, and little foreign cultural elements should be considered in the en-

vironment setting to increase the chances of early childhood exposure to English. We also hope parents should respect children's right to choose bilingual learning. When children are interested in English and like learning, they should buy bilingual picture books, watch bilingual movies, TV, and cartoons to meet the learning needs of early childhood, and accumulate learning experience. Resolutely oppose the "primary school" tendency of English learning, and prohibit parents from using violence, intimidation, threats, and other means to force early children to learn English.

4.2.2. Define the Goals of Early English Teaching and Improve the Quality of Early English Teaching

The above research shows that early children can learn English, which the key factors are how teachers teach and how early children learn. At present, the tendency of "primary school" in bilingual education for early childhood is serious. Early children who are required by elementary school teaching are demanded word spelling and reciting every day, and passively accept grammar knowledge, which the unclear action of English teaching is not suitable to the law of early childhood development. The practice of "pulling up seedlings to help them grow" increases the cognitive burden of early childhood and hinders early English learning with a negative impact. To effectively solve these problems, we need to clarify the goals of early English teaching as soon as possible and expose children to contact and use language in the English language environment. English curriculum should focus on interesting things in daily life, starting from listening and speaking English. The teacher should focus on children's emotional and cognitive development to accumulate early childhood English learning experience laying the foundation for later English learning. At the same time, kindergarten should create an English language environment with a variety of corner materials and multimedia technology to increase children's English language input opportunities. Teachers in kindergarten should adopt a variety of teaching methods and carry out a large number of game activities to allow early children, peers, and other teachers to use English in communication and interaction, and improve the quality of early English teaching.

4.2.3. Develop Early Children's Critical Thinking and Forming a Cultural Appreciation

Early bilingual children have cognitive advantages, which are reflected in the cognitive ability of children to reason and think in one or two languages. In early English teaching, children should consciously cultivate their language thinking ability so that early childhood can gradually adapt to the English environment and bilingual use. At the same time, we know that language and culture are inseparable, early children learning English should also learn English culture. Affected by the Chinese culture, children who acquired the mother tongue have a transfer effect on English learning. Therefore, the culture of the mother tongue is marked in second language learning. We need to train bilingual talents in the future to go abroad and play a role in the international arena. Early childhood English teaching should cultivate children's intercultural thinking, that is, to be the inheritors of traditional culture, but also to contact and understand English culture. They can critically view the similarities and differences between Chinese and foreign cultures, and avoid the two negative tendencies of "cultural arrogance" and "cultural inferiority". We should help early children to establish cultural self-confidence and national self-esteem for discovering the unique qualities and characteristics of different cultures. The early children need to improve cultural appreciation and strive to become truly international talents.

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