

The Content Knowledge of Chinese Early Childhood Teachers Who Teach English as a Foreign Language

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Abstract

There is a need to have a nuanced understanding on content knowledge (CK) of Early Childhood Education (ECE) teachers who teach English as a foreign language (EFL). This study used stimulated recall classroom observation to investigate the categories of CK of ECE EFL teachers. Six EFL teachers participated in this study. The data revealed CK of ECE EFL teachers consists of three categories: knowledge of first language acquisition, knowledge of second language acquisition and linguistic knowledge. Teachers majored in English and ECE had differences in the most frequently reported subcategory and in the subcategory of *how first/native language is learned*.

Keywords: teacher knowledge; early childhood English education; English as a foreign language; stimulated recall

Introduction

There has been a growing interest in the past decades in research on teacher knowledge. Content knowledge (CK) is one kind of teacher knowledge key to the profession of teaching (Rollnick & Mavhunga, 2016; Shulman, 1987). It is the knowledge of the specific subject and related to the content teachers are required to teach, which includes knowledge of the subject and its organizing structures (König et al., 2016; Shulman, 1987). Shulman (1986) argued that knowing a subject for teaching requires more than knowing its facts and concepts. Teachers must also understand the organizing principles and structures and the rules for establishing what is legitimate to do and say in a field.

Researchers have been attempting to identify the categories of CK in different subjects and different levels of education to get a better understanding of teachers and their teaching. A few studies have provided evidence showing that teaching English as a foreign language (EFL) is distinctive from teaching other subjects for several reasons: the teaching content and the teaching tool are united in a foreign language class; the teaching methods rely heavily on oral interaction; and the teachers are required to have both language and intercultural awareness (Borg, 2006; Burns et al., 2015; Larsen-Freeman, 2008).

Lafayette (1993) provided a theoretical framework to analyze CK of EFL teachers. CK has been conceptualized as comprising three categories (Lafayette, 1993): language proficiency, culture and civilization, and language analysis. He argued that

language proficiency is essential for teaching a language effectively. In addition, language teachers need to be acquainted with the culture of the target language, and they should support students to gain awareness that they themselves are cultural beings. Regarding language analysis, he considered that teachers should have knowledge of linguistics structures and applied linguistics. For EFL teachers of early childhood education (ECE), CK should include some specific categories that are unique to this field. Young children have not yet developed their first language (L1) fully. The understanding of theories and principles of both children's L1 and second language (L2) acquisition impacts upon their instruction. The role of caretakers is crucial for early childhood L1 acquisition, as well as for L2 acquisition (Murphy & Evangelou, 2016). Children construct new language actively through interactions with their parents, teachers and peers (Lantolf, 2006). Children's outputs appear to imitate the verbal and nonverbal language of their parents, teachers and peers and involve negotiation of meaning with their interlocutors. Finally, as English teachers of children focus on oral language instruction, knowledge of phonology is considered to be central in teaching (McCutchen et al., 2002).

There is very limited empirical work devoted to this area. The only study that we are aware of is Kim (2013) which examined teacher knowledge of ECE EFL teachers in Korea based on Lafayette's (1993) theoretical framework. In the study, 336 ECE EFL teachers responded to a questionnaire of Early Childhood English Teacher Knowledge (ECETK) and it was found that CK comprised three categories: teachers' knowledge of

L1 and L2 acquisition, which includes knowledge of theories of how L1 and L2 are learned by children, the role of caretakers in children's L1 and L2 acquisition, and the role of the child in L1 and L2 acquisition; teachers' linguistics knowledge, which includes phonology, syntax, morphology, discourse, pragmatics and sociolinguistics; and target language proficiency, that is their overall and classroom specific language proficiency. This study found that CK of ECE EFL teachers is multidimensional and not unitary as Shulman's (1987) theoretical model of teacher knowledge has suggested and pointed out that more research is needed to further define and refine its categories. To address this gap, the current study used a qualitative method, stimulated recall classroom observation, to investigate whether these categories of CK apply to Chinese ECE teachers.

In addition, it is important to understand the factors which influence the CK of ECE EFL teachers (Tsui, 2003). The teacher's major background, whether in English education or not, was found to be a most important source of ECE EFL teacher knowledge. This is a factor that can be supported by evidence from research on comparisons of specialist teachers (whose majors are English) and generalist teachers (whose majors are not English) in ECE EFL contexts. Enever (2014) indicated that generalist teachers are employed to teach foreign languages in several countries in Europe. Quite a few studies have indicated the differences between specialist and generalist teachers in ECE EFL contexts. Generalist teachers have expertise in preschool pedagogy, rich relationships with children to underpin motivation and

learning, ability to integrate the foreign language into all aspects of classroom life and a long-term view of children's learning in whole sense. However, generalist teachers lack oral proficiency in English, and also the knowledge of methods of language learning for children and skills in making lesson plans, selecting and adapting materials, correcting errors and giving feedback (Enever, 2014; Zein, 2016). Given the substantial diversity in the actual provision of ECE English teachers, the current study also tried to compare generalist teachers with specialist teachers in terms of different categories and subcategories of CK.

Context of Teaching English to Young Learners in China

Since the beginning of the 1990s, English teaching in ECE has gained wide attention from families, kindergartens, academics, mass media and the public in China. There are more and more kindergartens making English a part of their curricula. For example, in Guangdong, Henan and Yunnan Provinces of China, there are 356 (2%), 749 (4%) and 160 (2%) Chinese/English bilingual kindergartens respectively (Education Department of Guangdong Province, 2018; Education Department of Henan Province, 2017; Education Department of Yunnan Province, 2017). Although early childhood English education is prevalent in China, the government has not set up regulations or standards to provide guidance for these kindergartens. Yu and Ruan (2012) stated that, presently, most English programs are based more on teachers' intuitive understanding in Chinese kindergartens.

In the beginning, a big proportion of ECE English teachers in China were part-time teachers, including foreigners, middle school teachers and college teachers. Children were taught English in methods similar to those used with adults. Until the late 1990s, the college undergraduates who had majored in English or in ECE but had some training in English teaching gradually became the majority of full-time kindergarten English teachers (Liao, 2002). Tang (2008) described two common types of kindergarten teachers. One is the regular teachers, and the other is the teacher who is employed specially to teach English to kindergarteners. The first type of teachers majored in ECE, and are characterized by competences in ECE curriculum and child psychology, but have limited proficiency in English. The other type majored in English, and have structured knowledge and skills in English, but are quite poor in ECE. The content, processes, and methods they adopt in their teaching do not address the developmental needs of kindergarteners. It is evident that both types of teachers are not capable of teaching early childhood English in China (Gao, 2013).

Research Questions

Against the above backgrounds, the current study used a qualitative method to study the structure of CK among ECE EFL teachers in the Chinese bilingual kindergartens, and to compare the two groups of teachers to see whether differences in CK between them could be attributed to differences in their majors. The study addressed the following research questions:

1. What are the categories and subcategories of CK of ECE EFL teachers in

classroom practice in China?

2. Are CK categories and subcategories of ECE EFL teachers majored in English the same as or different from those majored in ECE?

Method

Participants

Purposive sampling was used in the study to recruit six representative cases with certain variations. One factor influencing the sampling for this study was the two types of ECE EFL teachers identified by the Chinese scholars (Tang, 2008), those who have majored in ECE, and those who have majored in English. Agreement was obtained from the participants prior to the classroom observation. Finally, six female teachers were chosen for the study. Two had majored in English and four in ECE; four were from private bilingual kindergartens and two from a bilingual kindergarten affiliated with a university. The characteristics of the six sampled teachers are summarized in Table 1.

Data Collection

Data collection was conducted by the first author of the study. She is an experienced early childhood educator with training in both English language and early childhood education. With expertise in the field, research in the data collection process was able to ask relevant and important question during the interviews.

Videotaped Classroom observation

The study was intended to carry out open-ended classroom observation to

capture a realistic picture of ECE EFL classroom teaching. The observation continued for two months and a total of 13 half days were selected. Twenty-four classes were observed for the six teachers. Classes observed were intended to cover as many areas of EFL teaching as possible and as different grades as possible. A total of 24 observations were made of the six English teachers' lessons for the three levels (K1, K2 and K3). All the lessons were video-taped by a portable digital video camera. The videos were downloaded on the laptop to be watched by the teachers. Field notes were also taken to supplement the video recording of the lessons.

Stimulated Recall

Twenty-four English lessons were selected and video-recorded in total. Each lesson was followed by stimulated recall with the observed teacher on the same day. The teachers watched the recorded videos of their observed lessons. They were stopped at certain points while watching the videos and asked to verbalise their thinking and reasoning behind certain actions. Using segments of videotapes of classroom teachers in practice, together with the stimulated recall protocols, can demonstrate to the teachers the complexity of teacher thinking during classroom practice and be used to mentor the teachers to analyze the teaching process and expand their knowledge base (Karimi & Norouzi, 2017). While an intact picture of knowledge involved in the lessons observed cannot be drawn by stimulated recall, it can outline the categories of knowledge practiced and talked about by the teachers (Mullock, 2006).

The time lag between teacher thinking while teaching and the reporting after the

teaching was designed to be as small as possible to facilitate recall, and always on the same day as the observation. This approach was recommended by Gass and Mackey (2005) to ensure the reliability of recall. The stimulated recall interviews following the classroom observations were audio recorded.

After each stimulated recall session was conducted, the audio of the session was transcribed in the same week of the observation. Preliminary analysis of the transcription revealed issues that deserved to be pursued, which resulted in the generation of more questions for subsequent sessions. The follow-up questions were added into the subsequent sessions to clarify key points which were given by the participant. This interactive process continued until the information provided by the subject was saturated (Drew et al., 2008; Grbich, 2007).

Data Analysis

The two authors together conducted the data analysis. Both have expertise in English language education and ECE. Based on the audio transcription of the stimulated recall sessions, a summary of each session was produced. For data, the observation duration was around ten hours, the interview duration was around 14 hours, and 273 392 words were collected. All the data were analyzed using NVIVO 12 Pro. The analytical framework of teacher knowledge in the present study followed the categories constructed from the literature review. Relevant information was identified and put into the following analytical framework consisting of three knowledge areas: 1) *Knowledge of child L1 acquisition in practice*, 2) *Knowledge of child L2 acquisition in practice*, and

3) *Knowledge of linguistics in practice.*

Other categories or subcategories were constructed based on the data collected. All the transcripts of the qualitative stimulated recall or interview data were coded using NVIVO 12 Pro. This was done interview by interview. The interview data were divided into meaning segments with categories and subcategories being synthesized, based on these meaning segments. The categories and subcategories of the first interviews analyzed were given codes. These codes were then applied to the rest of the interviews. Other codes emerged as the process continued. The data were analyzed inductively (See Table 2). After this, the categories and subcategories of the teachers majored in English were compared to those majored in ECE (See Table 3).

Results

The Categories and Subcategories of CK of ECE EFL teachers in Classroom Practice

The qualitative data revealed three constituents as the core domains of CK of ECE EFL teachers in the Chinese classroom context: knowledge of child L2 acquisition (75%), knowledge of linguistics (15%), and knowledge of L1 acquisition (10%). The core categories and subcategories were presented below.

Knowledge of Child L2 Acquisition

How L2 is Learned. Almost all participants were in favor of children's learning of English from listening to speaking. This is in line with Haznedar (2015) and Tabors

(2008), who pointed out that young children need to pass through certain stages in learning English as an L2: a period during which they use their L1 in the L2 context; a silent period; a period during which formulaic and telegraphic speech occurs, with missing morphological elements; and productive use of the L2. For example, one participant explained the reasons why she displayed the same toys or teaching aids two times in different stages of teaching as follows:

The first time to use the toy pig was to let the children listen the word “pig.”

As the second time, it was used to let them say the sentence “it’s a pig.”

When children said, “it’s a pig,” the toy pig would come out of the box.

(Teacher H, teaching plan-k2-pig)

Except for highlighting the importance of listening and speaking in children’s learning of English, “Repeating” and “Guessing” were two other frequently mentioned words by participants. For example, one participant stated: *“Just repeat and do it over and over again. If he does not stand up, I pull him and let him stand up. It takes a while for them to be familiar with the instruction”* (Teacher H). Likewise, “guessing” played an important role in children’s learning of English. For instance, one participant stated: *“I took out two flash cards, one was ‘orange,’ and one was ‘red.’ I let children guess and flick orange. If a child flicked red, I reminded him/her. What I did was to let children guess the meaning of orange”* (Teacher H, teaching plan-k3-orange).

The role of the learner in L2 language learning. Two aspects were related to the children’s roles in learning English: their learning from peers and their imitation of

teacher's verbal language (Lantolf, 2006). Regarding the peer learning, one participant stated, *"Children are more willing to be with their peers, rather than just learning from their parents or teachers. He/she may want to speak a word or sentence to his/her classmates"* (Teacher E). Imitating or repeating what the teacher said was also considered as an important strategy of learning English at the early stage. For example, one participant stated: *"When I ask the K1 children 'what is this animal?' they follow me and answer 'what is this animal?' They say what I say and simply repeat my words. This is an imitation in children's early learning of English"* (Teacher E, teaching plan-k1-Dog). She further pointed out that *"It may take a half or whole semester or even a year for a child to come out of this imitating process"* (Teacher E, teaching plan-k1-Dog).

The role of the teacher in L2 language learning. One aspect of teacher's role in children's learning English was their input (Murphy & Evangelou, 2016). For example, one participant stated, *"You need to input many times in order to get one output. You need much more input, so that the child can understand the meaning and output accurately"* (Teacher E). Another aspect relevant to teacher's roles was their modified interactions with the children (Nikolov, 2009). How to provide appropriate elaborations, gestures and scaffolding to make the English language comprehensible to children were highlighted by the participants. For example, one participant stated:

When I ask, "what color do you like?" if a child doesn't know how to answer, I provide him/her a choice, "red, yellow, blue or green?" When I

ask, “what animal do you like?” I do some gestures and actions for the child. I know which child can answer the question and which child cannot. If it is the child who can answer, I will ask some difficult ones, for example, “How to make gray?” (Teacher E, teaching plan-k3-Gray Orange Pink)

How L2 sentence is learned. Some participants talked about the children’s learning of English sentences through hands-on operation of materials and different kinds of play in an ECE EFL classroom (Mourão, 2014; Mourão, 2018). One participant explained that the reason of playing the colored clay was to *“let the children learn the sentence ‘red and yellow can make orange’ by hands-on operation of clay”* (Teacher H, teaching plan-k3-Orange). The other participant gave an example to explain how the K1 children in first English class learnt the sentence “What is your name?” by a role play. She stated:

In the first English lesson, it was very difficult to teach the sentence “what is your name?” The children could not understand what you were talking about at all. This is a total immersion kindergarten. There were no Chinese in English classes. The class teacher and I had to play the roles of Star Bob and Star Jill [two characters of the English textbook] in each class. One person was Star Bob and the other was Star Jill. “Hello, what is your name?” “I am Star Bob.” “What is your name?” “I am...” It was by this way to let them learn the sentence. (Teacher E)

The participant also gave another example to explain the process of how children learnt complex sentences from simple sentences. She stated:

“What is this?” was a frequently asked question in class. The words “color,” “animal,” and “food” were learnt after the sentence “what is this?” When I used these words repeatedly in classes, the children finally understood the words and the sentences of “what is this color?” or “what is this food?” (Teacher E, teaching plan-k2-broccoli)

Knowledge of linguistics in Practice

The sound system of the English language. The accuracy of the pronunciation was named by the participants. For example, according to one participant: *“For a child, it is difficult to pronounce ‘three.’ Even for an adult, he/she may directly speak out the word from the mouth without biting the tongue. We are trying our best effort to give the children correct pronunciation”* (Teacher R, teaching plan-k1-Three & Four). Another participant also doubted about the reasonableness of putting some words difficult to pronounce in the K1 grade. She stated: *“The words ‘mouth’ and ‘nose’ are not easy to pronounce for a kid. If I speak the word “mouth” too fast, I don’t think children can pronounce it. I questioned about whether the two words should be learnt in K1”* (Teacher Z, teaching plan-k1-Mouth nose).

The English grammar. Most participants also highlighted the importance of using the grammar correctly in the ECE EFL classroom. According to one participant: *“It is impossible for a child to output a correct one, if he/she was given a wrong input...”*

I found 'It is a broccoli' was wrong and removed that 'a' [when preparing the lesson plan]" (Teacher E-k2-Broccoli). Likewise, another participant stated, "What a teacher says must be a correct demonstration to the children, um, an accurate input. For example, one is a leaf, many are leaves" (Teacher W-k3-A letter to my friend).

Knowledge of Child L1 Acquisition in Practice

How L1 is learned. The participants pointed out the process of children's language learning obeyed the rule from listening to speaking. One teacher encapsulated her knowledge in the following example from raising of her own baby. She stated:

When he [the baby of the participant] was one year old, he had a dog toy named "小棕[xiaozong]." At the beginning, he knew nothing about the meaning of 小棕. I said: "Baby, please give me 小棕." He took the toy but he could not say 小棕. At about one and a half years old, he could speak and began to say 小棕, 小棕. This was the rule of language learning. Firstly, a child needs to listen repeatedly. Then, he/she recognizes the object and what its name refers to. Finally, he/she imitates the adults to speak it out. (Teacher H)

The participants also highlighted the relations between children's L1 acquisition and L2 acquisition. One view was that children's learning of English was similar to their learning of Chinese. For example, one participant stated: *"In fact, there are no big differences between English and Chinese, they are both the tools of language communication"* (Teacher R).

The role of the child learner in L1 acquisition. Child's creativity in L1

acquisition and use was mentioned by one participant. She gave an example about the smooth switches between dialect and Mandarin of her child. She stated: "*At home, my child talked with me in Mandarin. However, he talked with his grandparents [who cannot speak Mandarin] in dialects. He is totally free to switch between the dialect and Mandarin*" (Teacher E). Another participant pointed out a phenomenon about a child's imitation of adults' verbal language. She stated:

You can observe a phenomenon that children repeat the last word. If you ask a child "你喜欢爸爸还是妈妈? [Do you like daddy or mummy?]" The child answers "妈妈 [Mummy]." If you ask a child "你喜欢妈妈还是爸爸? [Do you like mummy or daddy?]" The child answers "爸爸 [Daddy]." When a child does not fully understand a sentence, he/she habitually imitates the last word. (Teacher S)

The Similarities and Differences Between the Teachers Majored in English and in ECE

The Comparisons on CK Categories and Subcategories Between the two Groups

The Table 3 shows the two teacher groups to be similar in terms of the *number* of CK categories (3) and subcategories (8) extracted from their reports. A Spearman Rank Correlation test was conducted on the frequency counts of the CK subcategories of both sets of teachers. The result showed that the correlation is not significant ($r_s =$

.20, $p = .635$), suggesting important differences emerged between them in terms of the *type* of CK subcategories.

The Comparisons on Dominant CK Subcategories Between the two Groups

In Table 3, the column marked ‘All’ shows the frequency with which the CK subcategories were mentioned in each group of teachers’ report. The superscripts indicate the subcategories with frequency of at least 6% and were considered dominant. Gatbonton (2008) assigned a frequency of 6% as a criterion for inclusion into a dominance list because it was the dividing point in her teachers’ data between the more frequently reported categories and the rest, which were at 3% and lower frequency. Using the same 6% criterion here yielded *five* dominant subcategories for the teachers majored in English compared to *seven* for the teachers majored in ECE. A close examination of both sets of teachers dominant CK subcategories indicates that their rank orderings were also not the same. The dominance list of teachers majored in English was headed by how second/ foreign language is learned (37%), followed by the role of the teacher in L2 language learning (19%), the role of the learner in L2 language learning (19%), how L2 sentence is learned (12%), and the English grammar (8%). The list of teachers majored in ECE was headed by the sound system of the English language (30%), followed by how second/ foreign language is learned (26%), the role of the teacher in L2 language learning (11%), how first/native language is learned (9%), the English grammar (8%), the role of the learner in L2 language learning (8%), and

how L2 sentence is learned (6%). A Spearman Rank Correlation test conducted on these dominant CK subcategories revealed no significant correlation between them ($r_s = .76, p = .133$). This result means that, not only the *number* and *type* of dominant CK subcategories were not the same for both groups, but their frequency ranking was also not the same.

Discussion

This study examined the CK of six ECE EFL teachers practising in Chinese classrooms. We found that CK of these teachers consisted of knowledge of first language acquisition, knowledge of second language acquisition and linguistic knowledge. Teachers majored in English and ECE in their pre-service training had differences in the most frequently reported subcategory as well as in the subcategory of *how first/native language is learned*. The present study extended existing literature by providing initial evidence of the CK applied in early childhood English classrooms.

The Structure of CK of ECE EFL Teachers

Different from the model provided by Shulman (1987), the present study found that L1 acquisition theories, L2 acquisition theories, and linguistics knowledge were three distinctive factors rather than three subdomains of one factor, CK. The findings validate the three-dimensional construct of CK in ECE EFL teachers which was found by Kim (2013). Kim (2013) argued that linguistics knowledge, that is shared with others who know and use languages outside of teaching, could be regarded as common content

knowledge; Knowledge of first and L2 acquisition, that is important for ECE EFL teachers but not necessarily for others when language is used for other purposes, could be regarded as specialized content knowledge. As studies on the nature and structures of CK are predominantly carried out in the fields of mathematics and science (Rollnick & Mavhunga, 2016), this argument is needed to be validated by other studies on ECE EFL teacher knowledge. Kim (2013) also related the reasons of three-dimensional construct to the type of participants in the study. Kim argued that the participants were teachers who were working with preschool age group. Children at this age are still developing their L1s; therefore, knowledge of L1 acquisition processes is very important for teachers who work with this language group. The plausibility of this argument is validated by the current study. Pinter (2011) also indicated that knowledge of language development in general is important to ECE EFL teachers since their knowledge about how a child's L1 progresses and how much a child knows about his or her L1 grammar and vocabulary impact their L2 instruction.

Similar with L1 acquisition, ECE EFL teachers need to know the theories and principles of young learners' L2 acquisition, which includes the order and sequence of L2 acquisition, the factors affect L2 language learning and the roles of the teacher and the children in L2 language learning. There are many characteristics of young children learning an L2 in early childhood (Haznedar, 2015). Children need to pass through certain stages in learning English as an L2: a period during which L2 children use their L1 in the L2 context; a silent period; a period during which formulaic and telegraphic

speech occurs, with missing morphological elements; and productive use of the L2 (Tabors, 2008). Children also vary greatly in how they develop and use of L2, which is affected by their individual differences in age, motivation, L1, personality, identity and aptitude (Haznedar, 2015; Kiss & Nikolov, 2005). A quantity of features of teacher' input and interaction which can facilitate children's L2 acquisition have also been recognized by scholars, such as naming and referring in nonlinguistic way (pointing and gesturing) , slow speed of delivery, simplified grammatical structures and vocabulary, high-pitch voices and varied frequency of linguistics features (Snow, 1986). Lastly, children construct new language through imitating verbal and nonverbal language of teachers and peers and involve negotiation of meaning with their interlocutors (Lantolf, 2006). The characteristics described above about children's L2 acquisition may result in why this is a unique dimension of ECE EFL teacher knowledge (Zein, 2016).

Comparisons of CK Between ECE EFL Teachers Majored in English and in ECE

Similarities Between the two Groups

The present study found that the two groups, with different majors in their pre-service training, had similarities in the number of categories and subcategories of CK. This may be related with the possible origins of their knowledge. Currently, there are no specific courses on teaching English to kindergartners in Higher Education programs in Mainland China. All of them got their first taste of relevant training or courses until they themselves became kindergarten English teachers (Yu & Ruan, 2012). In-service

training was perceived as an important source that contributed to the teachers' knowledge. The similarities also suggested an "Early Childhoodization" in teachers who had majored in English and an "Angloization" in teachers who had majored in ECE (Ng, 2011).

Differences Between the two Groups

The present study found differences in CK between the two groups, this is in accordance with previous studies on comparisons of specialist teachers and generalist teachers in ECE EFL context (Enever, 2014). One interesting teacher group difference is that the most frequently reported CK subcategory by teachers majored in ECE was *the sound system of the English language* and not *how second/foreign language is learned*, which was the most dominant on the list of teachers majored in English. The tendency for the teachers majored in ECE to focus on the sound system can be explained by the fact that they provided children with relatively more opportunities to speak in English from the observations. It seems that they highlighted communication as an essential component in foreign language learning. However, the teachers majored in English relatively devoted more attention to the drilling of language items, in particular, vocabulary and sentence acquisition.

Such a difference also shaped the teaching process of the two groups. The most frequently reported subcategory by teachers majored in English, *how second/foreign language is learned*, was applied into the five stages of their teaching: the warm-up stage, the listen-and-repeat stage, the guess-the-meaning stage, the imitation stage, and

the application stage. As teachers majored in ECE focused on speaking and communication, they adopted a play-based approach in English teaching, mapping words and sentences in nursery rhymes (Figure 1). She said that this was used to let the children understand nursery rhymes more intuitively.

Another interesting difference, and perhaps with greater implications for teacher training, is the subcategory of *how first/native language is learned*, which was dominant on the list of teachers majored in ECE, but not on teachers majored in English. From the results, it was seen that the teachers majored in English adopted a different view from those majored in ECE. The former insisted on using the monolingual immersion model, while the latter acknowledged the crucial roles that L1 played in the ECE EFL classroom. This difference can also be observed from their classroom practices. In essence, it is argued that the L1 acts as a crucial psychological tool that enables learners to construct effective collaborative dialogue in group activities and which facilitates the clarification of meaning either consciously or unconsciously, and promotes communication, student participation and a positive rapport (Murphy & Evangelou, 2016). One possible interpretation of this result is that the teachers majored ECE may have learnt some courses related with child development in their personal education. Thus, they may not only paid attention to the teaching of English directly, but also in a way that appropriate to the preschoolers.

Implications

The current study has several implications for research and practice. The major

theoretical implication of this study is that CK, conceptualized as a unitary construct by Shulman (1987), is multidimensional in ECE EFL teaching and consists of three distinct subcategories, namely, knowledge of first language acquisition, knowledge of second language acquisition and linguistic knowledge. The categories and subcategories of CK identified in this study can be used for a variety of practical purposes. Curriculum specialists and teacher educators in China and other EFL settings can use them to develop knowledge-based ECE teacher education programs and curricula. Courses relating to the subcategories of CK, such as, *how second/foreign language is learned*, *the sound system of the English language*, and *how first/native language is learned* could be the core curricula of pre-service and in-service teacher education programs, as they account for a relatively high proportion and significantly affect ECE EFL teachers' classroom practice. In addition, teacher education programs should be designed for a specific type of ECE EFL teachers, for example, filtered by majors, but not merged together. Rokita-Jaśkow and Ellis (2019) indicated that the ECE EFL teacher who is a generalist needs to be trained with an understanding of how foreign language acquisition develops, while the ECE EFL teacher, who is a foreign language specialist, needs to be trained in child development and in teaching approaches appropriate for early years.

Conclusion

In conclusion, the present study used Shulman's (1987) theory of teacher knowledge as a basis to construct CK of ECE EFL teachers. It was found that CK is

multidimensional in ECE EFL teaching and consists of three distinct categories, namely, knowledge of first language acquisition, knowledge of second language acquisition and linguistic knowledge. In addition, teachers majored in English and ECE had differences in subcategories of CK: the most frequently reported subcategory by the two groups are different; and the subcategory *how first/native language is learned*, which was dominant on the list of teachers majored in ECE, not on the list of teachers majored in English. The study may have implications in the design of pre-service and in-service ECE teacher education programs, especially in teaching English to young learners.

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Table 1

Characteristics of the Six Sampled Teachers

Case	Name	Major	Years teaching English to young children	English Proficiency ^b	Degree	Kindergarten ^a
1	Teacher H	English	2	TEM-8	Bachelor	A
2	Teacher E	English	9	TEM-8	Bachelor	B
3	Teacher S	ECE	1.5	CET-4	Bachelor	C
4	Teacher R	ECE	10	CET-4	Diploma	C
5	Teacher Z	ECE	25	None	Diploma	D
6	Teacher W	ECE	16	None	Diploma	D

Note. ^a Kindergarten A, B and C are three private bilingual kindergartens located in three cities of Henan Province, China. Kindergarten D is a bilingual kindergarten affiliated with a university, also located in Henan Province, China.

^b TEM-8, the Test for English Majors Grade Eight, a recognized EFL test for English majors in China; CET-4, the College English Test Band 4, a recognized EFL test for non-English majors in China.

Table 2

Coding System of the Study

Category (Percentage)	Subcategory (Percentage)	Examples
Knowledge of child L2 acquisition in practice (75%)	✧ How second/foreign language is learned (28%) <ul style="list-style-type: none"> ♦ the rule from repeated listening to speaking ♦ the importance of listening 	<i>The first time children li time, it wa “it’s a pig.</i>
	✧ The role of the learner in L2 language learning (18%) <ul style="list-style-type: none"> ♦ their learning from peers ♦ their imitation of teachers 	<i>Children a peers, rath parents or</i>
	✧ The role of the teacher in L2 language learning (16%) <ul style="list-style-type: none"> ♦ teachers’ input ♦ teachers’ interactions with the children 	<i>You need t one output</i>

	<p>✧ How L2 sentence is learned (13%)</p> <ul style="list-style-type: none"> ♦ the difficulty and complexity in children's learning of English sentences ♦ the complexity to construct connections between words and sentences for children 	<p><i>In the first</i></p> <p><i>difficult to</i></p> <p><i>name?" T</i></p> <p><i>what you v</i></p>
<p>Knowledge of linguistics in practice (15%)</p>	<p>✧ The sound system of the English language (9%)</p> <ul style="list-style-type: none"> ♦ the accuracy of the pronunciation ♦ the words difficult to pronounce 	<p><i>For a child</i></p> <p><i>'three.'</i></p>
	<p>✧ The English grammar (6%)</p> <ul style="list-style-type: none"> ♦ the importance of using the grammar correctly 	<p><i>I found 'It</i></p> <p><i>removed th</i></p>
<p>Knowledge of child L1 acquisition in practice (10%)</p>	<p>✧ How first/native language is learned (6%)</p> <ul style="list-style-type: none"> ♦ the rule from repeated listening to speaking ♦ the relations between children's L1 acquisition and L2 acquisition 	<p><i>In fact, the</i></p> <p><i>English an</i></p> <p><i>of languag</i></p>

	<p>✧ The role of the child learner in L1 acquisition (4%)</p> <ul style="list-style-type: none"> ♦ a child's creativity in L1 acquisition ♦ a child's imitation of adults' language 	<p><i>He is total</i></p> <p><i>dialect and</i></p>
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Table 3

Categories and subcategories of CK of ECE EFL Teachers Majored in English (N=2) and ECE (N=4), and Frequency (in %) of Each Category and Subcategory

CK categories and subcategories	English Major					ECE M
	Teacher H	Teacher E	ALL	Teacher S	Teacher R	Tea
Knowledge of linguistics in practice			9			
The English grammar	5	11	8⁴	7	6	
The sound system of the English language	2	0	1	0	28	
Knowledge of child L2 acquisition in practice			87			
The role of the teacher in L2 language learning	7	33	19²	36	0	

How second/foreign language is learned	67	3	37¹	14	33
How L2 sentence is learned	12	11	12³	14	6
The role of the learner in L2 language learning	2	39	19²	14	6
Knowledge of child L1 acquisition in practice				4	
How first/native language is learned	5	0	3	7	22
The role of the child learner in L1 acquisition	0	3	1	7	0

Note. ALL= Data collapsed across all teachers in each group. Superscripts indicate the rank of the most frequent group.

Figure 1

Mapping Words and Sentences in English Nursery Rhymes



Note. The left-hand picture shows how the teacher used mapping to teach the nursery rhyme *Autumn*, while the right-hand picture shows how another teacher used it to teach the nursery rhyme *Ten Little Fingers*.