Re-exploring the Knowledge Base of Language Teaching: Four ESL Teachers' Classroom Practices and Perspectives

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Teacher knowledge and the nature of the teacher's corresponding knowledge base have been fundamental concerns of research in language teacher education for the past decade (Irujo & Johnston, 2001). However, studies of English as a Second Language (ESL) teachers' knowledge base and its development have been limited in scope, largely confined to empirical work on pedagogical content knowledge. The primary purpose of this qualitative study, a partial replication of Johnston and Goettsch (2000), is to explore the types of knowledge ESL teachers possess and utilize in their classes. Observations of four ESL teachers, as well as interviews with them about their classroom explanations, were analyzed qualitatively. Common data categories were developed via recursive reviews of the data. Both critical and phenomenological perspectives were employed to tap into at the knowledge base of language teaching. The results suggest the following categories as constituting the knowledge base of the four ESL teachers: (1) content knowledge, (2) knowledge of other languages, (3) knowledge of other fields, and (4) knowledge of learners.

Introduction

Teacher knowledge and the nature of the knowledge base have been among the most fundamental concerns of research in language teacher education for the past decade (Johnston & Goettsch, 2000). *Knowledge base* in this paper refers to the accumulated knowledge (e.g. skills and strategies) that teachers use in their teaching. It is important to understand what constitutes this knowledge base in order to maximize student learning and better prepare teacher candidates for the most acute needs of classroom language teaching. The purpose of this study, which is a partial replication of Johnston and Goettsch (2000), is to explore the nature and the sources of the knowledge base that ESL teachers draw on in their work.

Theoretical Framework

The importance of a knowledge base for teaching and the nature of teacher knowledge have long been recognized by teacher educators (Irujo & Johnston, 2001). This recognition

and interest in the nature of teacher knowledge and teacher cognition have comprised a major area of research in the field of general education since the mid-1970s (Freeman, 2002; Mullock, 2006). As Hu (2005) and Johnston and Goettsch (2000) suggest, the main influence on the current attention to teachers' knowledge base is the work done by Shulman (1986, 1987). Shulman's work introduced a new conceptual frame for understanding the knowledge base of teaching, which consists of the following categories: Content knowledge (knowledge of the subject matter); general pedagogical knowledge (knowledge about teaching); curriculum knowledge (with particular grasp of the materials and programs that serve as "tools of the trade" for teachers); pedagogical content knowledge (application of knowledge); knowledge of learners and their characteristics (teachers' beliefs and assumptions about how students learn and what they know); knowledge of educational contexts (ranging from the workings of the group or classroom to the governance and financing of school districts and the character of communities and cultures); and knowledge of educational ends, purposes, and values, and their philosophical and historical grounds (Shulman, 1987, p. 8).

Following their counterparts in the field of general education, researchers in the field of Teaching English to Speakers of Other Languages (TESOL) and applied linguistics have also begun to examine ESL teachers' knowledge base (e.g. Breen, 1991; Freeman & Johnson, 1998; Freeman & Richards, 1996; Johnson, 1994; Mullock, 2006; Richards, 1998; Richards & Nunan, 1990; Watzke, 2007; Woods, 1996). They have indicated various sources that shape the knowledge base of language teaching such as teachers' prior language learning experiences (Almarza, 1996; Ariogul, 2007; Johnston & Goettsch, 2000), their understanding of second language theories and the nature of language learning (Smith, 1996), or learners' attributes (Breen, Hird, Milton, Oliver, & Thwaite, 2001).

More recent studies explored different aspects of pedagogical content knowledge in particular. For example, Gatbonton (2008) examined the categories of pedagogical knowledge that novice ESL teachers possessed and compared them with those found in experienced teachers. Although the major categories did not vary for these two groups of teachers, details within these categories were reported to be different. In another study, Ellison (2007) analyzed how two teachers drew on such knowledge to help their students learn the material presented in classroom settings. Other studies looked into the development of pedagogical content knowledge. For instance, while Badawi (2009) investigated the effectiveness of a blended learning model in developing EFL teachers' pedagogical knowledge, Hlas and Hilderbrandt (2010) explored the acquisition and articulation of pedagogical content knowledge with a specific focus on the impact of teacher education programs on language teachers' knowledge base.

Still, studies of ESL teachers' knowledge base and its development are relatively inadequate when compared with other fields of education (Borg, 2003; Mullock, 2006).

In addition, most of the studies conducted in the TESOL field are predominantly based on pedagogical content knowledge. There is limited literature about other categories of knowledge base of language teaching. In order to address this gap in the literature, this study aims to explore the types of knowledge ESL teachers possess and utilize in their classes. *The main research question addressed in this study is: What kinds of knowledge do practicing ESL teachers actually have and use in their teaching?*

Method

Participants

The participants for this research were four ESL teachers who varied in terms of their ESL teaching experience: Maria, Robert, Adam, and Christine (pseudonyms). Their ages ranged from mid-20s to early 60s, with language profiles from monolingual to bilingual. Maria and Robert taught in an Intensive English Language Center of a university in the Western U.S. while Adam and Christine taught at a community college in the same area. Further demographic information about the participants is presented in Table 1.

Convenience sampling was utilized in selecting participants. Specifically, participants were chosen because of their proximity to the researcher's work and their willingness to participate. The researcher received the schedules of language teachers working in the institutions from the ESL coordinators. Teachers who were teaching integrated skills (listening-speaking/reading-writing/listening-speaking-reading-writing-grammar) were invited via e-mail. Participants for the study were then selected from those who responded.

Table 1

Demographic Information

Name	ESL Teaching Experience	Degrees	Ethnicity	Languages
Maria	More than 14 years	BA & MA in English Language and Linguistics	Caucasian American	English
Robert	More than 25 years	BA in Psychology; MA in TESOL	Caucasian American	English, Japanese
Adam	5 years	BA in Spanish; MA in Literacy	Caucasian American	English, Spanish
Christine	2 years	BA & MA in TESOL	Chinese	English, Chinese

Setting and Context

The aim of the ESL courses offered at the community college is to help students whose native language is not English to succeed in college and at work. To meet the needs of ESL students, courses in different levels and skill areas are offered: listening/speaking, reading, writing/grammar, and vocabulary/spelling. The classes observed for this study were high-intermediate and low-advanced listening and speaking courses, in which students practiced pronunciation and listening skills based on the academic content. Other classes observed were the high-advanced reading and writing class, which aimed to strengthen the college-level writing skills of students, and the grammar classes, which focused on systematic practice of correct spelling, grammar, and punctuation. In each class, there were 15-20 students coming from various language and cultural backgrounds.

Data Collection

Data for this qualitative study consisted of transcriptions of passages from the teachers' classes, observations including field-notes, and follow-up interviews with the teachers (see Appendix). The teachers were audiotaped as they were giving explanations or were engaged in teacher-centered activities. The teacher observations took approximately 2-3 class hours. The teachers were observed twice at most. Within two weeks after the observations, the teachers were provided with a copy of the transcriptions from their classes and given time to read them through. They were then interviewed and asked to reflect on their specific explanations, such as how they clarified a particular grammar point or defined a new term or word. This semi-structured, one-on-one interview with each participating teacher was conducted at his or her office and audio-taped.

Data Analysis

After recordings from classroom observations were transcribed, teachers' language related explanations, clarifications, and definitions of words were noted in particular. These highlighted sections served as the "knowledge of teachers" and formed the basis for a number of interview questions. Common data categories were developed via recursive reviews of the interview data. Tentative themes were then identified and compared across all four interview transcripts. These themes were saved for further examination, or eliminated when they failed to provide significant data evidence. Additionally, the data were carefully reviewed for negative cases that contradicted a theme or offered alternative perspectives on significant points. Finally, the themes and categories were compared against the framework developed by Shulman (1986, 1987) for further interpretations.

This study adopted both critical and phenomenological perspectives in looking at the knowledge base of language teaching. As suggested by Shank (2006), "we attempt to 'get inside' the meanings and the world of that person" (p. 89) with phenomenological lenses. By using such a lens, I sought to understand the construction and use of teachers'

knowledge from their point of view. This way, I aimed to minimize the researcher's bias and enhance the validity of the study. Several other strategies were used to ensure the validity of the design as well as that of the data analysis techniques. For instance, in-depth interviews allowed opportunities for comparisons to be made and thereby helped refine my ideas so that evidence-based categories could be formed. The triangulation of data sources (e.g., field notes, interviews) also broadened my understanding of the phenomenon and maximized the probability that emergent themes were consistent across different data sources (McMillan & Schumacher 2006). Furthermore, after the interviews, my interpretations of participants' meanings and the explanation of overall process were confirmed through casual conversations with the participants, which McMillan and Schumacher refer to as "member checking" (p. 326).

Results

An interpretive and constant comparison analysis of the interview data and classroom transcripts revealed the following four major categories, which characterized the knowledge base of language teaching as described by the participants: (a) content knowledge, (b) knowledge of other fields, (c) knowledge of other languages, and (d) knowledge of learners. Each category is discussed in the following sections.

Content Knowledge

Content knowledge, in this paper, refers to the sources of teachers' knowledge with regard to grammar, vocabulary, and phonology. Through the data obtained from observations and interviews, the sources of content knowledge were categorized into two groups: (i) previous education and experience, and (ii) external sources.

Previous Education and Experience

The teachers reported that their own school experiences greatly shaped their perception of teaching and their own developing practice. When teachers were asked how they knew what to say when giving an explanation related to a language issue and where this knowledge came from, they all stated that their educational backgrounds and teaching experiences played a significant role in shaping their content knowledge. Their undergraduate and graduate course work in linguistics and TESOL served as the essential source of their content knowledge. In the first example, Maria, in her high-intermediate listening and speaking class, was teaching the pronunciation differences between past tense endings with a focus on allomorphs. The following excerpt is from the beginning of that explanation:

> There are three pronunciations for the English past, uhm regular verb past tense, and basically the pronunciation is determined by the previous sound. Okay, so let me start with this one because it's the most common pronunciation. Everybody, put your hand up on your throat, uhmm, and, uhmm, say /d/. See

> your voice box vibrating? For all consonants that are like that, they are called voiced consonants. If -ed is preceded by a voiced consonant sound, the pronunciation of *-ed* is /d/, okay?

Later on, during the interview, when Maria was asked where this knowledge came from, she explained:

> In this particular case, with the past tense endings, this is actually a common error from [our] English linguistics classes. I didn't know the rule consciously until I was a sophomore in college and that's where the linguistics comes in for me. I draw a lot on my linguistics background ... It is one of the problems that are actually taught classically in an elementary linguistics class to teach what an allomorph is. That is, one syllable has three different ways of being pronounced ... So I just draw on that ... This would have come from undergraduate preparation.

This specific extract indicates how Maria has benefited from her own school experience. The previous coursework has made her knowledge of rules explicit.

Similarly, Christine, who is a non-native speaker of English, tells how she connects her own second language learning experiences with her teaching:

> I can anticipate the difficulties my students will face when learning a new grammatical structure because I had similar difficulties while I was learning the same thing myself. So, I remember how I overcame the same problem and ... to teach it to my students... I try to teach the same thing in different ways.

Christine's personal experience in learning and using the second language helps her become aware of her students' linguistic and cultural needs. She says this awareness enables her to anticipate and act on her students' language problems and find out strategies to overcome those challenges.

Apparently, teachers' experiences and educational backgrounds also form the basis for their mental processes of storing, sorting, and accessing knowledge. For instance, when offering an explanation or answer upon a question posed by a student in class, Maria says:

> I have considerable knowledge of grammar and so I can usually explain the rule quickly off the top of my head – I am not sure if everybody can do that. It has to do with my linguistics background and then experience I think. But I can't think of a sentence off the top of my head. But, in terms of pronunciation, I can usually do it pretty quickly.

Her quote indicates that she stores the knowledge from her educational background and teaching experiences and accesses her formal learning experiences readily.

Adam, in his spelling and grammar class, had no difficulty giving sample words as examples while teaching prefixes and suffixes. When asked about how he stored all those words, he said, "Those are somewhere in my mind, and when it is time, I would just use them." Even though it seems obvious that all teachers somehow store such knowledge, it is important to note that none of them is conscious of the exact ways the content knowledge is stored.

External Sources of Knowledge

These teachers also rely on a variety of outside sources of knowledge, including software programs, grammar books, and textbooks. The content in Robert's low-advanced listening and speaking class was related to psychology. The speaking and listening activities were about abnormal behavior. During his lectures, he defined a number of new terms. When asked about how he provided the exact definitions from the field of psychology, he said:

> I got them from Microsoft Word. You know, it is a reliable source, and not too complicated for my students. I mean, it offers simple explanations or synonyms. And, I think it is important to know how to benefit from technology because I believe it leads to more efficient teaching.

Using Microsoft Word as a constant source, Robert built a lexical corpus, which he used in his teaching. Similarly, Maria emphasized the role of grammar books as part of her knowledge of the subject matter. In addition to grammar books, dictionaries were another source of content knowledge for Christine and Adam.

Taken together, even though they used the materials for different purposes, what was common among these four teachers as seen from their answers is their strong reliance on external sources, as well as on previous education and experiences, in building and shaping their content knowledge.

Knowledge of Other Fields

The teachers also reported that knowing about other disciplines was a part of their knowledge. In other words, they built connections to other content areas and made these content areas relevant to their students' learning. Since the listening and speaking classes were content-based, both Maria and Robert stated that they were not teaching only language but also content. Content, in this sense, refers to a topic in an academic domain such as science, psychology, or literature. Hence, it differs from the content discussed under the previous category, *content knowledge*.

In his listening and speaking classes, Robert was getting ready to start a new chapter titled "abnormal psychology." In the warm-up stage of his class, he did not seem to have any difficulty lecturing on the topic because he holds a bachelor's degree in psychology. He said if it had not been his major, he would have had to search on the Internet or look

to other sources in order to be knowledgeable about the subject. He commented on how he felt comfortable teaching a content area that he is familiar with:

> I do not want to teach something, um, let's say, a content area I am unfamiliar with. Well, everybody would feel uncomfortable teaching something that they don't have enough knowledge about. I always choose a content area I feel comfortable with. You saw how much I enjoyed teaching abnormal psychology because I know what it is about.

In addition to rich explanations regarding the topic, his knowledge of psychology further helps Robert in defining unknown words easily for his students, as in the following example:

> Now, for this class we are going to talk about abnormal behavior. Okay, now...abnormal behavior can be...divided into two groups. One is neurotic behavior. Do you know what I mean by neurotic behavior? Neurotic has something to do with our nervous system and neurotic behavior is a mild mental disorder, characterized by depression, okay, anxiety and hypochondria. Okay? First, do you know what depression is?

Robert moved from explaining one concept to another smoothly and provided definitions including technical terms based on his related background.

Maria is another participant who integrated her knowledge of content with her language teaching. The following description from field notes further supports this. The purpose of the class observed was to help students learn how to look at art critically, comprehend a lecture, expand their vocabulary related to artwork analysis, and improve their speaking, listening, and note-taking skills.

> Maria said they would learn how to analyze a work of art because they would have a field trip the next day to an art museum. She showed pictures and samples of paintings by famous painters by using a projector. Before doing so, on the chalk-board, she wrote: physical properties, subject matter, illusionary properties, formal elements, and viewer perspective. These are the questions students are supposed to ask and find answers to while visiting the art museum. Maria demonstrated how she analyzed several works of art by addressing those categories on the board. The explanation she makes for every painter and painting is really impressive. ... Students seem to really like the variety in the materials used and they participate actively today. I can tell from their expressions (e.g. "wow," "really") that they are interested in and excited about the topic and also they constantly ask questions.

Through her detailed explanations about painters and their paintings, Maria provided a considerable amount of input for her students. Her presentation looked as if it was a

lecture by an art expert. Later on, during the interview, Maria highlighted the importance of knowing other fields. She reported that this expert-knowledge came from her own interest in art. Maria loves art and she reads about the histories of paintings and life-stories of famous painters, which enabled her to make a dynamic presentation in her class and expose her students to rich input. According to her, if a language teacher knows more about the content she is teaching than what is presented in the textbook, she is better in restating her questions, paraphrasing the content, and summarizing the key ideas.

For Christine, knowing about other fields not only shaped her knowledge, but also fostered her confidence. She thought that "teachers, over time, can expand the variety of content areas as they become more confident and competent."

Knowledge of Other Languages

All four teachers stated that knowledge of other languages was a significant source of their knowledge of language teaching. Although Maria and Robert did not speak any language other than English, they were *knowledgeable about the syntax* (i.e., the sentence structures) of some of the languages that their students speak. Robert stated that knowing a language other than English, especially if the language is the native language of the students, would potentially effectuate higher-quality instruction. Teachers seemed to utilize their knowledge of different languages in teaching a wide variety of skills, ranging from grammar to vocabulary. For example, when dealing with students' pronunciation issues, Maria said she refers to Spanish, a language spoken by many students in her high-advanced listening and speaking class. She said:

> I was surprised when I first heard students having problems with pronunciation of the past tense endings. It was initially Spanish speaking students who seemed to have biggest problem with it. Knowing the differences between pronunciation and spelling in English and Spanish, I was able to diagnose the problem.

Apparently, Maria's knowledge of Spanish helped her to not only diagnose the problem but also solve it. She said that she does not speak Spanish but she knows enough about it. She also has syntactic knowledge of Italian, German, and most European languages. Consequently, she knows when an explanation is needed in advance and can readily provide it.

Similarly, knowing various aspects of different languages enables other teachers to know what to emphasize and when to give further examples. For instance, Christine, in her review of the future tense, gave the following examples which include several statements both in the future and the simple present:

> You should say "I will give it to you later." You cannot say "I give it to you, later." Remember that we use the future tense when we talk about our plans in the future. "I have a stomachache. I will see my doctor tomorrow." We don't say "I see my doctor tomorrow."

When asked why she gave example structures in simple present although her focus was future tense, Christine said:

> Because it is what my Hispanic students say. I don't speak Spanish, but I know this is a "Spanish" thing. I mean my Hispanic students use simple present tense when they should use future tense. I show them the right way and the incorrect use on purpose because I know most of them will say it incorrectly, in an incorrect way.

As can be seen, in her grammar class, Christine gives an example to illustrate the right and wrong usage. She did so because she believed her Spanish-speaking students needed this type of input. Two other participants, Robert and Adam, also used their knowledge of other languages in different ways in their teaching. Robert knows the word and sentence structures of Japanese because he lived in Japan for several years and learned the language there. This knowledge, he said, allows him to help his Asian students bridge the knowledge of their first language and use their first language to reinforce their learning of English. Similarly, Adam mentioned that he resorts to his knowledge of Spanish to point out grammatical differences and to help his Spanish-speaking students overcome trouble with English vocabulary.

Knowledge of Learners

The teachers stated that another factor that affected their choice of explanations or examples was the *knowledge of their students,* which refers to their beliefs and assumptions regarding what students know and how they learn. For example, while teaching a new grammatical rule, Christine highlighted the exceptions and pointed out the difference between the written and spoken language. The following excerpt was taken from her lesson on changing the verb tense in reporting statements.

> In informal conversations, people may not change the past to the past perfect form. Here is an example. "I just saw him at the party." "Michelle said she saw him at the party." Not "she had seen him."

Christine said she felt she had to concentrate on that exception. She explained why:

> Because they will come and say, "but this is what my native speaker friend says. She did not say it in the past perfect form." And then they will ask you why. Since I know this, whenever there is an exception to any rule or, a difference between formal versus informal use, I say, okay, listen, here is something different.

From her explanation, it appears that Christine addressed the use of language in informal and formal contexts whenever it was appropriate. She believed that this was what her students, who were in contact with native speakers outside the class, would need. This belief came from her students' questions, which Christine considered an important type of feedback.

Several other participants also pointed out the importance of feedback in helping them determine if an explanation is needed or if their explanation was adequate. This feedback comes in various forms: non-verbal, written, or spoken. Adam said:

> Feedback from students is, actually, a way to get to know your students. Through their feedback, you will know what they like, what they dislike, what they want to learn, what they find interesting, you know. So yes, feedback is really important in helping you get to know your students.

All participants stated that they knew their students both on an individual level and as part of a group. Such knowledge included students' interests, their perceptions, culture, life experiences, motivation, and sense of humor. Robert, who had taught English for 19 years in Japan, said that he knew what his Asian students would consider funny or humorous and told jokes that they were likely to appreciate. He thinks that this helps his students relate to his examples while also making learning itself more fun. The teachers also reported that an understanding of their students' development, growth, and maturity help them see where their students have been, where they are right now, and where they are going next.

Discussion and Conclusion

The primary purpose of this study was to explore the types of knowledge ESL teachers possess and utilize in their classes. Since Johnston and Goettsch's work (2000) was pivotal to the present study in terms of both concept and design, it is helpful to briefly summarize their findings. Johnston and Goettsch reported that (i) teacher knowledge is primarily shaped by teachers' educational background, "ranging from middle and high school grammar classes to graduate course work in linguistic courses focusing on the structure of English" (p. 446-447), and their teaching experiences and (ii) categories of teacher knowledge are intertwined in complex ways as they are played out in the classroom and in teacher thinking. The current study supports these findings. Like the teachers in Johnston and Goettsch's study, the teachers in this study also stated that their educational backgrounds and teaching experiences played a significant role in shaping their subject-area or content knowledge. In particular, their graduate study and teaching experiences have been shown to form the basis of their initial conceptualization of language teaching, which in turn influenced their instruction.

Here, the current study raises two important questions. First, is whatever a teacher knows about language teaching transmitted into the teacher's mind before she enters the classroom? And second, could it be that a teacher may develop expertise in the course of teaching? The participants in this study have benefited substantially from their own experiences. Therefore, as Hillocks (1999) argues, teacher knowledge is apparently not simply transferred from certain sources to the teacher, but also constantly constructed and reconstructed.

The relevance of knowledge of the learners had also been explored in Johnston and Goettsch (2000) and other related studies. For example, Richards and Farrell (2005) examined it under the category "understanding of learners" (p. 9), which they defined as the "deepening understanding of learners, learning styles, learners' problems and difficulties, and ways of making content more accessible to learners." Johnston and Goettsch (2000) argue that how teachers verbalize their students' learning and the assumptions they might have in their minds would constitute their *knowledge of learners.* The findings of the current study expanded the contents of knowledge of learners. In this study, the teachers' answers indicated that knowledge of learners included a variety of issues, such as students' interests, perceptions, cultures, life experiences, motivation, and sense of humor, which seemed to play a significant role in lesson planning. The findings further indicated that teachers' knowledge of their learners is dynamic, and is constantly updated and made relevant, depending on the cultural group or language group that a teacher comes across.

One new component of the knowledge base of language teachers found in this study is *teachers' knowledge of other languages.* The results of this study show that knowing a language other than English, especially if it is the native language of the students, is likely to result in better instruction because such knowledge enables teachers to compare and contrast different languages and identify the challenges students face in their English learning. This way, teachers can provide more relevant examples or offer more detailed explanations regarding a particular grammar point or new word. At this point, it might be argued that multilingual teachers might have an advantage over monolingual teachers because they know more "content". Yet, this is only an argument and one should keep in mind that such a broad claim should be treated with caution given the fact that the findings of this study cannot be generalized to all teachers and situations due to the small number of participants studied here and the qualitative nature of the study.

A second new component of the knowledge base of language teachers that was found is *teachers' knowledge of other disciplines and/or fields* that supplements their formal TESOL training. Based on the class observations and teachers' answers to the interview questions, it can be seen that when teachers know more about the content that they are teaching (e.g., a topic in science, psychology, or literature), they are more likely to provide more quality input. For example, in Robert's lecture on abnormal behavior, he used a number of technical terms given his expertise in this area, which otherwise he might not have been able to use. What made Maria's presentation more comprehensible and richer was apparently the technical terms she used and the ample content-related information she provided.

It should be noted that a number of linguists, along with Shulman himself, may argue that "knowledge of other languages" is part of linguistics and therefore a part of content

knowledge. They may also contend that "knowledge of other fields" would also be lumped together with content knowledge. In other words, if Robert is teaching English and abnormal psychology, those two subjects will then form the "content" of his instruction. Johnston and Goettsch (2000) emphasize the difficulty of drawing the boundaries of content knowledge. To them, content knowledge refers to "the knowledge teachers have of the subject matter" and further acknowledges that:

> The nature of the "subject matter" of language teaching is in fact an open question. Even in subjects such as physics or history, it is debatable what the "content" of the discipline might be; clearly, then, in the field of language learning, it is even harder to picture the body of knowledge that serves to constitute the field (p. 446).

As pointed out by Johnston and Goettsch, it is difficult to delineate the boundaries of content knowledge in language teaching. Specifically, in most of the content-based ESL classes, what constitutes the content might be a difficult question to answer. Yet, in this paper, I argue that the categories of "knowledge of other languages" and "knowledge of other fields" should be separated from content knowledge, since not all ESL teachers would necessarily possess the knowledge of other languages and/or fields. Content knowledge, then, should be reconceptualized, and it should only refer to the sources of teachers' knowledge on English grammar, vocabulary, and linguistics.

In addition, a number of scholars might argue that knowledge of learners should be examined under pedagogical content knowledge. I argue here that knowledge of learners includes a great variety of issues ranging from culture to individual differences. Therefore, pedagogical content knowledge should be examined as a different category. Shulman's definition of the pedagogical content knowledge further supports this. He states that pedagogical content knowledge includes "an understanding of how particular topics, problems, or issues are organized, presented, and adapted to the diverse interests and abilities of learners, and presented for instruction" (1987, p. 8). In other words, pedagogical content knowledge only addresses the issue of "how to teach," while knowledge about learners refers to the "assumptions about how learners learn and what they know." As such, they are two different categories although they are tightly related or connected given that teachers' assumptions about their learners would affect the way they teach.

The findings further indicate that the knowledge base of non-native teachers did not differ much from that of native speakers. Both groups draw on almost the same sources in constructing, expanding, and shaping their knowledge. Apparently, the ways in which native and non-native speaking teachers develop their knowledge base is a unique contribution of this study to the current understanding of ESL teacher knowledge.

Overall, this study re-explores and re-conceptualizes the knowledge base of language teaching while identifying some new aspects of it via empirical evidence. In this sense, the study shed some new light on the field's understanding of teacher knowledge. The study also hopes to contribute to the improvement of practice in language teacher education.

Limitations and Suggestions

Although the study is based on a relatively comprehensive framework of knowledge base of ESL teachers than the other studies, it still only looks into a small part of the knowledge base of language teachers. It does not explore, for example, other categories in Shulman's model. Therefore, there is a need to further explore other aspects of the knowledge base of language teaching in order to improve the practice in language teacher education. Another limitation is the small number of participants. Additionally, since it is hardly possible to examine what was going on inside the learners' mind, we cannot be entirely certain that the principles that these ESL teachers noticed did indeed come from the sources that they identified and not elsewhere.

Perhaps the biggest challenge of teacher knowledge research and a possible threat to the validity of the current study is the difficulty of determining the sources of teachers' knowledge. It is rarely possible to trace the single origin of any given thought. Hypothetically, a teacher could say that her classroom instruction was rooted in her undergraduate and/or graduate studies, but how do we know for sure that she did not already "know" how to teach language before? How can we truly know what they know? How can they truly know where their knowledge comes from?

There is not likely to be a simple answer to these questions. However, given current research methodologies, we should rely on what teachers tell us. As several researchers have argued (e.g. Cortazzi, 1993), teacher knowledge is largely in the form of narration and is evident in teachers' experiences. Keeping this in mind, through multiple observations and recursive analysis of data, such challenges and limitations were minimized in this study. Still, future longitudinal and narrative studies conducted with different participants and in different settings might offer further credible evidence.

Last but not least, although this study indicated that the knowledge native and non-native teachers possess does not differ much, this finding should be generalized with caution. The reason is that all the teachers in this study either studied or spoke a second language, which is not necessarily representative of all ESL teachers. Given the fact that TESOL field has a large number of monolingual ESL teachers, the participants in this study may not constitute a representative sample in this regard. Therefore, the differences between the knowledge base of teachers who are native speakers of English and that of those who are non-native should be further explored.

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Appendix
(Interview Questions)

Please review the attached transcripts of explanations you gave in your class.

1. Were you satisfied with these explanations? Which aspects of them were you satisfied with, and which might you change if you had a second chance?
2. What knowledge did you draw on in giving this explanation? How did you know what to say?
3. Where did this knowledge come from? From your graduate preparation, experience?
4. How do you judge whether or not an explanation has been successful?
5. In general, what makes a good explanation? How long should it be? How simple or complicated should it be? How do you know that?
6. Where does students' knowledge of L2 come from?
7. What advice would you give to an inexperienced teacher who says she is worried about how to give explanations of grammar and other language points when students ask questions in class?

Participants were also asked about their own training and experience, in particular previous experience of teaching integrated skills. (Adapted from Johnston & Goettsch, 2000)