

A Study of Pedagogical Content Knowledge (PCK): Teachers' Views on Learning

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Abstract: Pedagogical Content Knowledge (PCK) has been given a lot of attention in the academic field in recently years, in particular, in the field of teacher cognition and teacher knowledge. This research aimed to study one aspect of pedagogical content knowledge (PCK), teachers' views on learning, as shown in the practices of six Chinese in-service teachers teaching College English at two universities in the south of China by using a qualitative multiple case study approach. The study found that the participant teachers were generally experienced in their receiving views on learning, but possibly unskilled in their negotiation and experiencing views on learning. This research has implications for university (even other levels of schools) teachers' continuing education and professional development in China: based on the conclusion that receiving views were more common among the participant teachers than experiencing or negotiation views on learning, in order to help in-service teachers develop their PCK (regarded as professional knowledge), in particular their views on learning (one aspect of PCK), universities are encouraged to organize academic activities related to teachers' views on learning (as professional development), such as inviting experts, scholars from outside, or even their own teachers to share their experiences in terms of views on learning.

Keywords: PCK, Teachers' Views on Learning, Teacher Cognition

1. Introduction

Pedagogical content knowledge was first put forward by Shulman in 1987 as part of teachers' knowledge base for teaching [12]. There is a huge difference between content knowledge and pedagogical content knowledge, which is the knowledge of the instruction of that content [2]. Pedagogical content knowledge is a special mixture of content and pedagogy that represents teachers' personal understanding of the profession [30].

The main components of PCK in Shulman's concept include not only knowledge of specific content and teaching strategies, but also an understanding of students' learning difficulties. Teaching is considered to be a series of activities arranged by a teacher purposefully to advance the learning of students in the school context [26]. PCK is the knowledge teachers use in the process of teaching [20].

The current empirical study aimed to investigate and re-conceptualize university teachers' PCK in order to understand teachers as reflective practitioners [4]. To guide the overall structure of the present study, the following general

question was formulated: *What are the characteristics of Chinese in-service College English teachers' Pedagogical Content Knowledge in terms of their views on learning?*

1.1. Teacher Cognition

In the late 1970s, researchers began to explore the thought processes by which teachers plan and carry out their teaching [13]. This is referred to as teacher knowledge research. To some degree, teachers' thinking can be deduced from their actions while teaching in the classroom [14]; that is why researchers' thinking about teaching has shifted from discussing teacher behavior to discussing the teacher cognition behind the behavior. Since the 1990s, the study of teacher cognition has developed into an important area of academic research. Teaching goes far beyond knowledge of the subject being taught and covers numerous less visible or less socially recognized activities that are performed by teachers within an empty room [26]; such activities should be taken into consideration in the analysis of teachers' knowledge [12].

In the case of language teaching, Borg, in his influential 2003 literature review of language teacher cognition,

redefined teacher cognition as the unobservable cognitive dimension of teaching. The relationship between teachers' unobservable knowing and their actions in second language (L2) classroom teaching practice has become a topic worth discussing. Three key features of language teacher cognition have been identified by previous studies: complexity, dynamics, and contextualization. However, Teaching English to Speakers of Other Languages (TESOL) teacher cognition has not been intensely discussed, and no researchers have gone deeply into the context of these teachers' daily classroom teaching practices [1].

1.2. Teachers' Views on Learning

If teachers are viewed also as learners, learning is the common denominator between teachers and students [18]. There is no doubt that only when students perform related language practices can they improve their comprehensive language capabilities in a real sense even if they have already mastered vocabulary and grammar. This principle is also applicable to teachers: only when teachers accumulate corresponding teaching experience through exhaustive trial-and-error in classroom teaching can they enhance their teaching quality.

If learning in practice is admitted to be mutual between teachers and students, the development of teachers' and students' learning is closely connected. Theoretical views on learning can be applied to the development of both teachers and students. Three common views on learning are briefly introduced below based on the existing literature.

1.2.1. Receiving View

This view regards learning English, for example, as a process of receiving language knowledge and language skills [6]. This view of learning holds that, as the knowledge and techniques memorized by the learners accumulate, they will be able to produce the language automatically. As learners in this learning mode receive the knowledge and techniques mainly from their teachers and teaching materials, the students need to memorize the knowledge and methods imparted by their teachers. This view attaches little importance to students' internal factors like learning motivation, prior knowledge, experience, and creation. The learning strategies students adopt are mostly concerned with memorization and 'practice makes perfect,' such as taking notes, reciting vocabulary and texts, and practicing sentence patterns and grammar. This view of knowledge is reflected in behaviorist theory [31], which holds that human language behavior is just like most other behaviors: they are operable and can be acquired through different kinds of external reinforcement methods like voice, gesture, facial expression, and movement.

The most obvious feature of teachers holding the receiving view is that they overemphasize repeated drills of language forms and highly control language input and students' independence, requiring students' language output to be absolutely accurate [34]. They may use teaching methodologies like the "Grammar-Translation Method," "Direct Method," and "Audio-Lingual Method" that are built on behaviorist theory. The possible positive influence of this

rote learning is that students are able to become familiar with and memorize knowledge of different English forms, but the unavoidable negative consequence of this kind of excessive drill is that it turns learners into passive memorizers who seldom pay attention to the internal process of constructing personal knowledge.

1.2.2. Experiencing View

The main rationales for the experiencing view are cognitive theory and constructivism. The standard bearer for cognitive theory, Chomsky [8], believed that behaviorism places too much emphasis on the decisive effect of the external environment on human behavior and neglects people's proactive effect on their verbal behavior. Constructivism originated with Piaget [28], who thought that the relationship between human subjective cognitive structure and stimulus from the external environment is assimilation and accommodation. The intellectual activities of language learning lead to changes in language's cognitive structure.

Therefore, the key to language development lies in being stimulated by the communicative context of the language. This is why, when people utilize constructivism to guide English teaching, they always fully consider students' prior knowledge background, experience, practical needs, and personal interests. This approach encourages teachers to challenge students' potential so that students can acquire the comprehension of language through the experience of trying to use the language themselves [15].

Teachers with the experiencing view in classroom teaching tend to emphasize learners' motivation for learning and regard language learning as a process of hypothesizing and testing language. This view stresses a series of learner psychological experiences in the learning of language such as attention, comprehension, planning, monitoring, and modification [37]. It holds that students should be at the center of the process of language learning with the development of student's language knowledge as the outcome of the personal construction of knowledge and teachers as the suppliers of learning opportunities and conditions.

Teachers who favor the experiencing view firstly consider students' prior knowledge, experience, interests, and needs when selecting learning content [36]. Secondly, when designing learning activities, they always pay attention to extending language input, concentrating on semantic logic, actively providing students with personalized opportunities to comprehend language, and cultivating students' awareness and ability to monitor the language.

In this mode of learning, students have to utilize their prior knowledge, techniques, strategies, and experience fully to construct the significance of language and to internalize language rules [23]. The learning strategies adopted are mostly related to prediction, presumption, analysis, generalization, appraisal, and interpretation. Moreover, frequent use of these strategies may give students opportunities to internalize the language, but the actual development of their competence to apply the language may be affected due to insufficient communication with others.

1.2.3. Negotiation View

Vygotsky [32] believed that learning is a process in which learners proactively construct personal significance according to their knowledge background in a social situation with others' assistance. This socio-constructivist theory emphasizes not only learners' constructing significance based on their own prior knowledge and experience, but also the functions of others and the social factors affecting learners when they construct personal comprehension. In the case of classroom teaching and the learning environment, the main social factors include teacher, student, task, and classroom. Hence, when utilizing socio-constructivist theory to guide English teaching, teachers place particular emphasis on individual social negotiation and its development. This is exactly the rationale for the negotiation view.

Teachers holding this view believe that language learning and the development of the learner are the result of communicating and negotiating with the environment [35]. In this mode of learning, in addition to creating cooperative and communicative opportunities for students, teachers also function as the guides or facilitators of the negotiation. Also, teachers who favor the negotiation view share two obvious features in their classroom teaching [22]. The first is positive construction of the classroom context, including organizing group activities, cultivating a cooperative and communicative classroom atmosphere and habits, and letting students interact, help, and complement each other when they negotiate in context. The second is to provide guidance and support according to students' needs rather than to command, with the purpose of developing students' autonomy and challenging their potential. However, unified learning objectives may not be achieved due to discrepancies among the learners.

For teachers who hold the negotiating view, effective English learning is not about how much knowledge and which learning methods students receive directly from their teachers, but about whether students can construct personal comprehension of language through healthy and positive communicative activities in class [7].

2. Methodology: Data Collection Procedures

2.1. Pre-Classroom Teaching Observation

I first obtained written consent from the teachers who agreed to participate in this research in accordance with ethical considerations. Then, before classroom teaching observation, I conducted one-on-one initial interviews (see Appendix A for interview questions) once with participant teachers in written or spoken form. (Note: in deference to participant teachers' personal preference or convenience, they always had the right to choose either written or spoken forms or both, in either English or Chinese or both languages, at any step in the data collection.) Also, before classroom teaching observation, the participant teachers provided me with a soft copy of their lesson plan and its rationale in either English or Chinese in written or spoken form using a template I provided

to them (see Appendix B for details). In addition, they provided me with a (hard or soft) copy of the textbook used, and I searched for the latest College English curriculum requirements (2007) to use in the data analysis.

2.2. In-Classroom Teaching Observation

I observed in person every participant teacher's classroom teaching of College English one time for less than one hour, using an observation guide (see Appendix D for details) to remind me of what to observe during the lesson. I designed the guide, and the classroom teaching was both audio- and videotaped. The teaching content was not limited and was totally up to the teachers.

2.3. Post-Classroom Teaching Observation

After the classroom teaching observation, participant teachers provided me with a soft copy of a self-reflection teaching report in either English or Chinese in written or spoken form using a template I provided to them (see Appendix C for details). Then, each participant teacher participated in a one-on-one stimulated recall activity with me (see Appendix E for guideline). Lastly, the final version of the data was given to each participant teacher so they could recheck it for accuracy.

2.4. Relationships Among Various Sources of Data

The data collection was conducted in a logical and coherent order. For example, during the process of the initial interviews, I was able to expand the questions I asked. Then, data from the teachers' lesson plans and the corresponding material from the textbook and College English curriculum requirements allowed me to check the degree of accuracy of what the teachers had said during the initial interviews. Classroom observation also confirmed whether or not what the teachers said during the interviews was consistent with what they did in their classroom teaching. The self-reflection teaching reports that the teachers completed after their observed teaching allowed me to examine teachers' comments on their own classroom teaching. I explored in depth the teachers' thinking behind their observed actions. Lastly, the final report submitted to participants provided accuracy confirmation of the teachers' data. Every method has its shortcomings, so the procedure of data collection for this research was structured to ensure data triangulation, as shown in the following diagram:

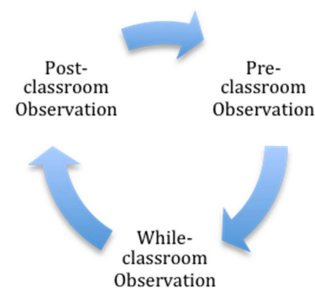


Figure 1. Diagram of Data Collection Procedure.

2.5. Researcher as Research Instrument

The centrality of qualitative research is the “gendered, multi-culturally situated researcher” [10]. The researcher plays the role of instrument in qualitative research [27]. It is essential to emphasize my role in this research since subjective aspects such as my ideas, attitudes, and perspectives, together with the shortcomings and limitations in my experience, education, and training could influence the entire process of completing this study; the researcher has an effect on the data collected and on the findings [24].

I had been teaching in one of the two universities where the data was collected. This means that, on the one hand, I was familiar with the context of the university but, on the other hand, it was easy for me to make pre-judgments. To avoid this, I was more a listener than a speaker when communicating with the participant teachers. Secondly, some participant teachers were my colleagues. I created a friendly, harmonious, relaxing, and comfortable atmosphere when talking with the participant teachers in order to be viewed as a colleague and friend, rather than a researcher. Also, I am bilingual in English and Chinese. I used Chinese Putonghua when speaking with the participant teachers in order to have a natural conversation with them during all the data collection activities, and translated the important parts of the transcriptions into English.

2.6. Context of the Teachers

According to LeCompte and Preissle [21], sampling refers to selecting representative participants. The researcher followed this principle to select potential participants “likely to be knowledgeable and informative about the phenomenon of interest” [24]. In addition, maximum variation sampling [25] was used to emphasize the diversity of participants' backgrounds. This enabled comparison and contrast among different participants in terms of their PCK.

As the *College English Curriculum Requirements* require teachers' expert knowledge and specialized skills to improve the quality of College English teaching, it is imperative that professional development for College English teachers should be put in place [16]. Therefore, this study chose to investigate in-service College English teachers. This study targeted in-service teachers also because they were living in the real social environment. Any results explored as they worked in their natural environment could be witnessed by objective onlookers.

The participants were diverse in a number of ways, as summarized in Table 1. In terms of gender, both male and female teachers were selected for this study. It was much more difficult to recruit male College English teachers than female College English teachers because, in the two universities, the number of male teachers teaching the English language was

much smaller than the number of female teachers. In terms of professional position titles, teachers at three levels of professional position title were selected in this study (associate instructor, instructor, and associate professor). It was also of great difficulty to recruit professors as participants because, in the two universities, most of the College English teachers had a medium-grade professional title (instructor).

As for age group, this study mainly investigated teachers born in the 1970s and 1980s. These young and middle-aged teachers were also the core teachers in the two universities. It was of high significance to research these teachers since how well students learned depended on them, at least in part. Novice teachers (with less than five years of classroom teaching experience) or elderly teachers were not involved in this research in the end because both universities had not recruited newly graduated young teachers for several years and elderly teachers were no longer active in the participating academic programs. (Very often they were just waiting for retirement.)

In terms of the highest degree obtained by the participant teachers, there were three levels: doctoral degrees, master's degrees, and bachelor's degrees. In these two universities, the majority of College English teachers had masters' degrees. The teachers' highest degrees were in various majors in the field of English language: literature, English language and literature, teaching, and translation. In terms of the level of university that had awarded these highest degrees, the teachers had graduated from both run-of-the-mill and elite universities (general universities and key universities). Four of the participants had graduated from normal (teacher education-oriented) universities and two from comprehensive universities. Teachers without formal professional training (those who had graduated from non-teacher education-oriented universities) acquired their teaching competence and professional understanding by interacting with their mentors, their colleagues, and their students in class [38].

As for participants' years of teaching College English, teachers need approximately five years to start to become experienced in teaching. In this study, since the teachers were young and middle-aged teachers, their teaching experience ranged from eight years to fifteen years. When it came to academic and teaching research interests, these teachers were interested in different research areas (teaching, literature, translation, and linguistics). In terms of students' evaluation of their teaching, these teachers received a wide range of scores from their students for their classroom teaching with a high of 95 and a low of 91. The scale between 95 and 91 was quite big here because the number of students who took part in the evaluation was relatively large. Finally, two teachers had been awarded provincial prizes in College English teaching contests and the other four had not.

Table 1. Participant Teachers' Particulars.

	Finance University (FU)			Teachers University (TU)		
	Ding (FU1)	Deng (FU2)	Yang (FU3)	Wei (TU1)	Liu (TU2)	Xie (TU3)
Gender	F	F	F	F	M	F
DOB	1980	1980	1977	1977	1979	1973
Position	Instructor	Instructor	Instructor	Instructor	Associate instructor	Associate Prof.
Experience	9 years	8 years	11 years	11 years	11 years	15 years
Interest	Teaching & literature	Literature	Literature	Linguistics	TEFLM & ETE	Translation
Degree	MA	MA	MA	MA	BA	Ph.D.
Major	Literature	Literature	ELL	Literature	TEFLM	Translation
Score/Percentage	94.14	91.904	92.162	92.744	95.02	91.838
University/Level	SYSU/Key	SCNU/Key	SCNU/Key	GXNU/Other	HNNU/Other	JNU/Key
Award	Provincial	No	No	Provincial	No	No

Notes:

TEFLM & ETE= TEFL methodology and English teacher education

Position= professional position title

Experience= years of teaching the course of College English

Interest= academic and teaching research interests/directions/areas

Degree= the highest degree obtained

Major= major of the highest degree

Score= the latest score by students on classroom teaching at the end of term

University= the university where the highest degree was awarded

Award= award for College English teaching

ELL= English language and literature

SCNU= South China Normal University

GXNU= Guangxi Normal University

HNNU= Hainan Normal University

JNU= Jinan University

SYSU= Sun Yat-Sen University

Table 2. Data Analytical Framework.

		(Aa) Language	
	(A)	(Ab) Skills	
	Lesson	(Ac) Strategy	
	Objectives	(Ad) Emotion	
		(Ae) Culture	
	(B)	(Ba) Interaction	
Content	Classroom	(Bb) Input	
Analysis	Dynamic	(Bc) Criteria	
(Mayring, 2000)	Factors	(Bd) Activity	
		(Ca) Reasonability	
		(Cb) Practicality	
	(C)	(Cc) Validity	(Cc1) Management
	Pedagogical		(Cc2) Organization
	Tasks		(Cd1) Students
		(Cd) Flexibility	(Cd2) Tasks
			(Cd3) Classroom

2.7. The Analysis of Students' Learning Strategies

Based on the following types of learning summarized by Gagné in 1970, in the data analysis of the current study, five objectives of teachers' classroom teaching are discussed, namely, the objectives of language knowledge, language skills, learning strategy, emotion and attitudes, and culture awareness.

Learning can be classified into five types. The first is the learning of language information: learning contents by using words to express or obtain the knowledge denoted by these words. In foreign language learning, the learning of related language knowledge refers to this type of learning. Second is the learning of wisdom and skills: the use of symbols to address issues, including the five skill acquisitions of

distinguishing, specific concepts, definition-type concepts, rules, and advanced rules. In foreign language learning, the skills of listening, speaking, reading, and writing belong to this type. Third is the learning of cognitive strategies: the special cognitive skills that are used for adjusting cognitive activities. The skills include adjusting attention, learning, memory, and thinking. This is obviously the core content of language learning. Fourth is the learning of action skills: learning to act or behave in social activities. The last is the learning of attitudes: this refers to the ability to determine personal behaviors by adjusting personal emotions. It is the principal content of any learning.

Foreign language teaching and learning in China should use attitude as the premise, knowledge and skills as the basis, and strategy as the center, as strategy can guarantee the effective application of knowledge and skills, and is the necessary condition for development. In addition, it is also the precondition shaping students' independent learning awareness. Thus, the mastery of strategic knowledge means that students should be able to learn how to learn, how to apply the target language, and how to master self-development.

3. Results: A Sample (Part of Entire Analysis) Is Below Owing to Word Limit Requirement

In the following data analysis, let's analyze the students' learning strategies as an example (point Ac in Table 2 above). Many common English language learning strategies have been discussed in the literature. Some are global (like planning,

monitoring, and assessing) while some are more specific to language learning (e.g., listening, speaking, and reading). The learning strategies a teacher uses to help his or her students to learn English shows components of the teacher's PCK such as his or her views on learning. Further explanations and more examples can be found in the following data analysis.

As a first example, teacher Wei's lesson used a number of different learning strategies that revealed the views on learning in her PCK. In her lesson, she used cognition strategies such as memorization, guessing, and note taking, but the students' adjustment, communication, and resource strategies for learning were the highlights of the lesson. For example, teacher Wei had asked students to prepare presentations before class based on the following rationale.

Stimulated Recall Extract (Teacher Wei): In the preparation of the presentations, the students needed to plan and revise the presentations continuously, by communicating with the teacher and independently reflecting on the topic, content, form, time control, and task distribution among different group members, and they needed to make full use of the possible learning resources, such as the internet. During the presentations, the student listeners could monitor and comment on the public presentations and raise questions if necessary. After the presentations, the presenters would possibly collect others' feedback and reflect on their presentations because they would be given more challenging presentation-related tasks to do by the teacher later in the term.

The fact that the first presentation of this lesson (on the topic of people's personality) was based on a home-study passage from the previous unit showed that teacher Wei also emphasized students' independent learning as a learning strategy. In the learning process of this lesson, negotiation was a must between teacher and students and also among the students themselves, evidence that the teacher's view on learning tended to be negotiational.

Teacher Xie's lesson differed from teacher Wei's lesson in terms of student learning strategies. In teacher Xie's lesson, the only type of learning strategy practiced by the students and emphasized by the teacher was cognition-related, with attention as a typical example. This shows that teacher Xie's view on learning tended to be receiving. The teacher seemed to ignore other learning strategies useful for students, such as adjustment, communication, and resource-related strategies. The students had prepared a role-play beforehand in groups for in-class public performance, during which they may have needed to use the learning strategies of communication and resources, but based on the in-class performance, the results of these learning strategies' use were not positive. In contrast, the students' learning strategies in teacher Liu's lesson were reflected in the following extract related to his observed classroom teaching:

Stimulated Recall Extract (Teacher Liu): During the first reading activity of the lesson, which was skimming to put the statements about the pictures presented by the teacher on the PowerPoint into the correct order, the students could use the identification strategy for placing the

statements about the pictures in different paragraphs of the text in the correct order. In the post-reading discussion on "Should we stop using English Abbreviations in China?", the students had to employ the learning strategy of critical thinking because they needed to think about "why and why not." Also, in this discussion, the students were free to make use of various learning resources for any purpose in order to complete the task, and they needed to use communication strategies to talk with their fellow students to answer "why and why not."

It is worth noting as well that more communication opportunities would have been provided if the students could have been encouraged to discuss within groups rather than in pairs. Thus, teacher Liu's view on learning tended to be more experiencing. Similar to teachers Wei and Liu, teacher Ding employed different types of student learning strategies in her lesson as follows.

Observation Extract (Teacher Ding): When the vocabulary about appearance, cosmetic surgery, and people's qualities was presented using PowerPoint, the teacher wanted the students to pay attention to the vocabulary because the words would be useful later for the description of their classmates' appearances. She wanted them to recognize the words if they had already learned them before, to take notes if they were new words for the students, and to keep the words in mind after class. When the students did pair work for the role-play, group discussions for the description of a classmate, and interviews on the importance of good looks, they needed to communicate with other classmates and the teacher about meaning, vocabulary, grammar, sentence patterns and so on, in order to plan and prepare for their public report later.

Students in class also frequently used e-dictionaries on mobile phones; these can be regarded as another important independent learning resource. Therefore, teacher Ding's view on learning was more negotiation-based. Based on the classroom observation, teacher Deng's views on learning tended to be negotiational. In the evaluation part of teacher Deng's lesson, the students were asked to role-play a dialogue they had prepared before class between a reporter and a pop star. To complete the homework, the students needed to communicate with their partners to practice before class. Teacher Deng explained:

Stimulated Recall Extract (Teacher Deng): The students had to confirm who played the role of a reporter and who played the role of a pop star. To interview a pop star, the students had to search for the pop star's personal information from various sources.

In the two vocabulary presentation activities, on movie genres and useful expressions related to movies, the students probably used learning strategies such as focusing on the words because they needed them to do other activities later (recognizing the words if they were not new to the students, writing the words down in a notebook if they were new, and reciting the words after class). This approach shows that teacher Deng's view on learning tended to be receiving. Meanwhile, teacher Yang highlighted the learning strategy of

attention in her lesson. For example,

Note Extract (Teacher Yang): *The teacher explained the vocabulary and analyzed the outline of the conversation. In addition, when necessary, the students needed to take note of useful expressions that they might encounter in the listening activities in the listening preparation part of the lesson.*

The students also needed to use the strategies of resource use (making use of reference books), adjustment (planning a dialogue with their partners), and communication (asking their partners for help) when the teacher asked them to prepare a role-play dialogue for five minutes before a public performance in the front of the classroom. However, the strategies of resource use, adjustment, and communication were strictly controlled in this lesson. That is to say, these strategies could not be practiced much in this case, because the final speaking task was only a situational role-play dialogue in pairs. This was not challenging at all for college students since they could easily follow the dialogue model explained by the teacher and simply replace some words. All in all, teacher Yang's views on learning tended to be receiving.

4. Discussion

Not many teachers' views on learning encompassed negotiation; that is to say, the number of teachers who carried out collaboration, cooperation, and interaction among teachers and students by making use of particular classroom teaching contexts was relatively small. In this study, two out of the six teachers, teachers Ding and Wei, held the negotiation view. It is also of significance that, in College English teaching and learning, where the target learners are adults, in order to fulfill students' needs, teachers must attach more importance to students' comprehensive use of English language knowledge [5]. This is because the students have already achieved a certain level of English language proficiency, so their demand for comprehensively applying English language knowledge is greater than their need for purely comprehending English language knowledge. The latter is always a key point in secondary schools rather than tertiary-level institutions like the research sites in this study [19].

Also, evidence in the data (from teachers Ding and Wei) showed that, in those College English classes that provided students with opportunities to apply their integrated English language knowledge, the students seemed more interested, active, and motivated to take part in classroom activities than in those classes that did not provide such opportunities. Moreover, the data analysis related to teachers Ding and Wei also suggested that teachers who emphasized students' application of English language knowledge displayed more negotiation views overall.

Some teachers, in their reflections, addressed the importance of students' in-classroom learning motivation by discussing various issues such as students' learning interests, students' learning initiative, and students' participation and involvement. "Teacher skills in motivating learners are central to teaching effectiveness" [11]. Therefore, student motivation is the responsibility of the teacher. Great teachers translate

their understanding of student needs into strategies that lead to motivation, engagement, and learning [17]. The data showed lots of teaching strategies that teachers used to motivate and engage students to learn.

Some examples of these teaching strategies were less teacher-controlled classroom teaching and more student-controlled classroom teaching (such as in teachers Wei's and Ding's classes, in which the students took the leading roles in the classroom activities), challenging classroom activities (such as in teacher Ding's class, in which the students were required to describe their classmates by using new vocabulary), teachers showing care for their students' needs (shown in the negative example of teacher Xie, who did not take care to check for students' understanding), and clear classroom management routines instilled by the teacher (all teachers did quite well on this point, except teacher Xie).

Additional strategies included eye contact between the teacher and students (all teachers had effective eye contact with their students except teacher Xie), reasonable time limits controlled by the teacher (for example, teachers Ding, Deng, and Liu were effective at time control), and maintaining a short distance between the teacher and students (teachers Yang, Xie and Liu were not skilled in this point because for most of the class time they stood on the classroom stage, while other teachers went around the classroom to observe and even join students' discussion).

Still more strategies included the teacher's confidence in the students' ability to succeed (such as teachers Ding and Wei, who arranged challenging activities for their students), the teacher's expectation that students would learn (teachers Ding and Wei mentioned in their interviews strong beliefs that their students would benefit from their ways of teaching), classroom pedagogical tasks of intermediate difficulty (all teachers did quite well on this point except teacher Xie), the voice of the teacher having intermediate pacing (teacher Xie spoke too fast), polite teacher talk (teachers Deng and Wei spoke in a very polite way to respect their students in their classroom teaching), and moderate body language from the teacher (all teachers were basically good at this in this study). These strategies can all increase students' classroom participation, interest, passion, enthusiasm, engagement, initiative, and motivation.

Because intrinsic factors (students' pride, the challenge of classroom activities, students' sense of success, etc.) are of more value for advancing students' learning motivation than extrinsic ones (feedback, praise, grades, bonuses), teachers should be encouraged to value intrinsic factors over extrinsic ones in their classroom teaching.

5. Conclusion

In terms of PCK, the results of the data analysis in this study revealed that the receiving views on learning were more developed in the participant teachers than negotiation or experiencing views. Receiving views were more common among the participant teachers than experiencing or negotiation.

5.1. Implications for Universities

Based on the conclusion that receiving views were more common among the participant teachers than experiencing or negotiation, universities play important roles in the professional development of teachers since universities provide the teachers with specific contexts for teaching and learning [33]. In order to help teachers develop their PCK (regarded as professional knowledge), in particular their views on learning (one aspect of PCK), universities are encouraged to organize activities related to teachers' views on learning (as professional development), such as inviting experts, scholars from outside, or even their own teachers to share their experiences in terms of views on learning.

Universities should encourage teachers to find a partner or partners in the universities or outside of the universities for experience sharing in terms of their views on learning. Classroom teaching observations should not mainly aim to select teachers or evaluate their teaching, but to create opportunities for teachers to reflect on learning views. Universities should also work together to let teachers from different universities share their views on learning. Universities can offer funding for teachers' continuing education as well. All in all, universities should create an academic environment in which teachers can grow professionally.

5.2. Research Limitations

There is a need for a longitudinal approach to teacher education, which can help teachers become skillful in teaching [3]. Due to its limited timeframe, this research study was only able to understand teacher' PCK (views on learning) horizontally. The research could not be conducted using a longitudinal approach that could continuously explore changes in teachers' classroom teaching related to their PCK (views on learning) over a particular period of time. As a result, I plan to conduct another research study in the near future investigating teachers' PCK (views on learning) using a longitudinal approach within a revised theoretical framework.

Author

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Appendix

Appendix A. Guiding Initial Interview Questions

The researcher gave an opening statement before the

interview formally started to introduce the purpose of this interview, the approximate length of the interview, and the ethical considerations related to the interview, to explain ways to answer the questions, and to express gratitude for the teacher's participation in the research project.

- a. What knowledge do you need to teach College English in this university?
- b. How do you set teaching objectives and select teaching content, and what is their relationship?
- c. What are the characteristics of non-English major students' College English learning in this university?
- d. How do you get to know the quality of your students' College English learning?
- e. How do you advance your students' College English learning, including before, in, and after class?
- f. What are the biggest achievements and sources of confusion in your College English teaching?
- g. What are teacher's role and students' role in College English teaching?
- h. Which of your former teachers impressed you most?
- i. What makes a good College English teacher for you?
- j. What is ideal College English teaching for you, including the classroom teaching environment?
- k. Which classes impress you most in your own and others' College English teaching, including pedagogical tasks?
- l. How do you describe your College English teaching methodology?
- m. When observing classes, what do you focus on more?
- n. When evaluating classes, what do you focus on more?
- o. In the oral presentation of classes, what do you focus on more?

Appendix B. Template of a Lesson Plan

Lesson Plan	
Teacher	Textbook
Orientation	Topic
Level of students	Students' major
Time	Classroom
Class size	Duration of lesson
Teaching aids	
Teaching Objective(s)	

Teaching Procedure		
Stages	Description	Timing
Stage 1		2 minutes
Step 1		1 minutes
Stage 2		2 minutes
Step 1		1 minutes
Stage 3		2 minutes
Step 1		1 minutes

Appendix C. Template of Reflection Report

Self-reflection teaching report	
Self-marking	_____ Out of 100
General feeling	
Advantages	
Problems	Solutions
Changes to my lesson plan	Reasons

Appendix D. College English Classroom Teaching Observation Guide

- a. How many key stages are there in the classroom teaching?
- b. What are the relationships among the different stages?
- c. What are the objectives of the classroom teaching?
- d. What are the contents of the classroom teaching?
- e. How does the teacher facilitate students' learning?
- f. Are the students interested and motivated to learn, or active in their learning?
- g. What are the teacher's teaching skills, strategies, or methods?
- h. What are the students' learning skills, strategies, or methods?
- i. How does the teacher make use of the teaching aids in his/ her classroom teaching?
- j. Do the classroom teaching and learning take place in a harmonious classroom environment?
- k. (Additional questions may be posed according to the teacher's teaching features.)

Appendix E. Stimulated Recall Guide

The researcher made an opening statement before the conversation formally began to introduce briefly the purpose of this conversation, how long this conversation would take, and the ethical considerations related to the conversation, to explain ways for the teacher to clarify his or her own classroom teaching behaviors, and to thank the teachers for taking part in this phase of data collection.

Notes: The following questions were those most frequently asked of each teacher in this part of the data collection in order to understand the justifications for their classroom teaching behaviors.

- a. What do you think is the reason for this phenomenon?
- b. Why did you design this classroom activity?
- c. What is your explanation for this part?
- d. Why is it like this?
- e. (More questions could be raised based on the teacher's specific teaching procedures.)

References

- [1] Borg, S. (2003). Teacher cognition in language teaching: A review of research on what language teachers think, know, believe and do. *Language Teaching*, 36, 81–109.
- [2] Bucat, R. (2005). Implications of chemistry education research for teaching practice: Pedagogical content knowledge as a way forward. *Chemistry Education International*, 6 (1), 1–2.
- [3] Bullough, R. V., Jr. (1997). Becoming a teacher: Self and the social location of teacher education. In B. J. Biddle, T. L. Good, & I. F. Goodson (Eds.), *International handbook of teachers and teaching* (pp. 79–134). Kluwer Academic Publishers.
- [4] Burns, A. (2010). Doing action research in English language teaching: a guide for practitioners. *Language teaching research*, 15, pages. 270-272.
- [5] Cai, J. (2002). The pressure that college English teaching has been facing. *Foreign Language Teaching and Research*, 34(3), 228–230.
- [6] Cen, H. (2011). An investigation of pre-service English teachers' language learning views. *English Teachers*, 9, 32–37.
- [7] Chen, J. & Wei, Q. (2012). A comparative study of English teachers' language learning beliefs between China and Thailand. *Journal of Qiannan Normal College for Nationalities*, 32 (4), 86–90.
- [8] Chomsky, N. (1959). Review of verbal behavior by B. P. Skinner. (NY: Appleton-Century-Crofts, 1957). *Language*. 35, 26–58.
- [9] *College English Curriculum Requirements*. (2007). Higher Education Press.
- [10] Denzin, N. K., & Lincoln, Y. S. (Eds.). (1998). *Collecting and interpreting qualitative materials*. Sage.
- [11] Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge University Press.
- [12] Fernandez, A. N. (2014, December 9). *Crossing the border to kindergarten*. Education Week.
- [13] Freeman, D. & Johnson, K. (1998). Re-conceptualizing the knowledge-base of language teacher education. *TESOL Quarterly*, 32(3), 397–417.
- [14] Freeman, D. (2002). The hidden side of work: Teacher knowledge and learning to teach. *Language Teaching*, 35, 1–13.
- [15] Guo, Q. (2012). A study of language learning views between students and teachers of English majors and their teachers [Unpublished doctoral dissertation]. Central South University.
- [16] Guo, Y. Y. (2013). *Professional development: Opportunity and constraint: A case study on professional development of language educators in China* [Paper presentation]. 5th National Academic Conference of Foreign Language Teachers' Education and Development, Guangzhou, China.
- [17] Hallinger, P. (2013). *Strategies for motivating and engaging students to learn* [Presentation]. Hong Kong Institute of Education, Hong Kong.
- [18] Han, G. (2011). *Constructing PCK in EFL teachers*. Shanghai Foreign Language Education Press.
- [19] Huang, J., & Shao, Y. (2001). The analysis of college English teaching and teachers. *China University Teaching*, 6, 20–22.
- [20] Kind, V. (2009). Pedagogical content knowledge in science education: Perspectives and potential for progress. *Studies in Science Education*, 45(2), 169–204.
- [21] LeCompte, M. D. & Preissle, J. (2003). *Ethnography and qualitative design in educational research* (2nd ed.). Academic.
- [22] Li, M. (2007). A study of the language teaching views of high school English teachers [Unpublished doctoral dissertation]. Southwest University.
- [23] Li, X. (2013). A study of pre-employment English teachers' language learning beliefs and metacognitive strategy. *English Teachers*, 13 (1).
- [24] McMillan, J. H. & Schumacher, S. (2001). *Research in education: A conceptual introduction* (5th ed.). Addison Wesley Longman.

- [25] Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. Jossey-Bass.
- [26] Montero, A. P. (2001). Delegative dilemmas and horizontal logics: Subnational industrial policy in Spain and Brazil. *Studies in Comparative International Development*, 36(3), 58–87.
- [27] Patton, M. Q. (2002). *Qualitative research & evaluation methods (3rd Ed.)*. Sage.
- [28] Piaget, J. (1967). *Six psychological studies*. Random House.
- [29] Shulman, J. (1986). Opportunities of a mentorship: The implementation of the California mentor teacher program. *Beginning Teachers*, 26.
- [30] Shulman, L. (1987). Knowledge and teaching. *Harvard Educational Review*, 57.
- [31] Skinner, B. F. (1957). *Verbal behavior*. Appleton-Century-Crofts.
- [32] Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- [33] Wang, F. (2014). *Study of America's Pedagogical Content Knowledge: Connotations, issues and enlightenment* [Unpublished doctoral dissertation]. Shanghai Normal University, Shanghai, China.
- [34] Xiong, X. (2010). Learning views of pre-employment language teachers on the foreign language. *Science & Technology Information*, 16, 129.
- [35] Yu, Q. (2007). Teachers' professional quality: An on-site investigation analysis and discussion of teachers' language view changes against the background of China's education reform. *Examination Weekly*, 28, 104–106.
- [36] Zhang, W. (2007). *A study of language learning views of English majors and their teachers grouped by high-low scores* [Unpublished doctoral dissertation]. Hebei Normal University, Shijiazhuang, China.
- [37] Zhang, W., & Zhao, Q. (2009). The comparison of language learning views between teachers and students of English majors grouped by high-low scores. *China Packaging Technology Expo*, 34, 43–44.
- [38] Zhou, M. (2013). Using traces to investigate self-regulatory activities: A study of self-regulation and achievement goal profiles in the context of web search for academic tasks. *Journal of Cognitive Education & Psychology*, 12 (3).