

High School EFL Teachers' Professional Competencies: Content Knowledge and Pedagogical Content Knowledge

Sadegh Shariatifar¹, Gholamreza Kiany^{*2}, Parviz Maftoon³

¹ PhD Candidate, Science and Research Branch, Islamic Azad University, Tehran, Iran

² Associate Professor, Tarbiat Modares University, Faculty of Humanities, Tehran, Iran

³ Associate Professor, Science and Research Branch, Islamic Azad University, Faculty of Foreign Languages, Tehran, Iran

Received: 2017/10/22

Accepted: 2018/05/14

Abstract: According to Teacher Education Curriculum Development Document (TECDD) of Farhangiyān University, teacher professional competencies include Content Knowledge (CK), Pedagogical Knowledge (PK), Pedagogical Content Knowledge (PCK) and General Knowledge (GK). Of these competencies, CK and PCK are specific to teachers of each major while PK and GK are common among all majors. This study was an attempt to explore the components that constitute high school EFL teachers' CK and PCK through review of the related literature and investigation of high school EFL teachers (N=40) and teacher educators' (N=20) perspectives. Based on the content analysis of these two sources which resulted in strong agreement, 20 items of CK and 17 items of PCK were identified. To validate the items and explore their underlying factors, data were collected from 445 high school EFL teachers and teacher educators using a questionnaire. Factor analysis with Varimax rotation was carried out on CK and PCK items separately. Regarding CK items, factor analysis gave way to the emergence of three factors, namely knowledge of the principles of language teaching methodology, knowledge of linguistics, and language proficiency. Regarding PCK items, factor analysis also gave way to three factors, namely knowledge of teaching and assessing the components of the curriculum, knowledge of developing, planning and managing language teaching, and knowledge of developing and evaluating instructional materials. The results of this study can be used in the design of high school EFL teacher education program.

Keywords: Content Knowledge (CK), Pedagogical Content Knowledge (PCK), Teacher Education Curriculum Development Document (TECDD).

* Corresponding Author.

Authors' Email Address:

¹ Sadegh Shariatifar (Shariat1352@yahoo.com), ² Gholamreza Kiany (rezakiany@yahoo.com), ³ Parviz Maftoon (pmaftoon@srbiau.ac.ir),
ISSN (Online): 2322-5343, ISSN (Print): 2252-0198 © 2017 University of Isfahan. All rights reserved

Introduction

Farhangiyān University is a university of teacher education and human resources development for Ministry of Education. Its main mission is to train and educate school teachers, including high school EFL teachers, in accordance with the teacher competencies stated in Teacher Education Curriculum Development Document (TECDD) of this university (2012). According to this document, teacher professional competencies in all fields of study go under four key competencies: Content Knowledge (CK), Pedagogical Knowledge (PK), Pedagogical Content Knowledge (PCK), and General Knowledge (GK). According to this document, CK refers to the knowledge on the subject matter that teachers teach, and it constitutes the knowledge that would not be shared with teachers of other majors. PK deals with the knowledge of pedagogy which is the knowledge that is shared with teachers of other majors and it consists of various knowledge of education. PCK is the amalgamation of pedagogical knowledge and content knowledge that make it possible for teachers to teach in their major. In other words, it is an amalgam of applied aspect of PK and educational aspect of CK that help teachers create effective pedagogical situations, as well as plan and teach the subject matter area. GK refers to the understanding of the affairs related to culture, health and environment, religion, an international language, country's national language, and politics. Of these competencies, CK and PCK are specific to each discipline, while PK and GK are common among all majors.

To educate qualified school teachers including high school EFL teachers, Farhangiyān University needs to identify the components that constitute the competencies that are specific to each major. In this regard, identifying the components that constitute high school EFL teachers' CK and PCK is important for this University because of the fact that as Graves (2009) states "the content of language teacher knowledge base varies widely, depending on who the teacher educators are, who the student teachers are, where they teach or will be teaching, who they will teach and so on" (p. 120). Additionally, as put forward by Kumaravadivelu (2001, 2006), any teaching context, because of its particularity, calls for local exigencies and lived experiences. Thus, to meet the need of Iranian high school EFL teachers, this study is intended to fill in this gap.

Review of the Related Literature

Studies on EFL/ESL Teachers' knowledge Base

A wide variety of research has been done on teacher education, especially on language teacher knowledge base. Some scholars including Larsen-Freeman and Johnson (1998), Lafayette

(1993), Richards (1998), Roberts (1998), Dittrich, Shrum and Stewart (2001), and Tarone and Allwright (2005) explore the knowledge base of language teaching that underlines teacher education and the kind of instructional practices that help teachers acquire it. For instance, Richards (1998) suggests that there are six domains of content that make up the knowledge base of language teaching. The domains include knowledge of theories of teaching, teaching skills, communication skills, subject matter knowledge, pedagogical reasoning and decision making skills, and contextual knowledge. In the same vein, Roberts (1998) proposes a model consisting of six types of language teacher knowledge that make up the knowledge base of language teaching system. His model includes CK and PCK, general pedagogical knowledge, curricular knowledge, contextual knowledge and process knowledge. As mentioned before, exploring the components of these types of knowledge especially the components of CK and PCK that are specific to language teachers can help teacher educators and policy-makers educate prospective English language teachers efficiently.

Components of CK

As mentioned above, individuals should have enough knowledge of different components of CK to gain membership in language teaching profession. Table 1 shows the types of knowledge that constitute the components of language teachers' CK in the literature.

Table 1. *Components of CK in the Literature*

Types of Knowledge	Proposed By
1. Syntax	ACTFL, 2002; Richards, 2012; TESOL International Association, 2010
2. Semantics	ACTFL, 2002; Harmer, 2007; Osama & Balbay, 2004
3. Phonology	ACTFL, 2002; Delahunty & Garvey, 2010; Richards, 2012
4. Morphology	ACTFL, 2002; Osama & Balbay, 2004; Richards, 2012, 2015 TESOL International Association, 2010
5. Discourse	ACTFL, 2002; Richards, 2012; TESOL International Association, 2010
6. Pragmatics	ACTFL, 2002; Kasper, 2001; Richards, 2012; TESOL International Association, 2010
7. Listening skill	ACTFL, 2002; Bartels, 2009; Butler, 2004
8. Speaking skill	ACTFL, 2002; Bartels, 2009; Butler, 2004; Glisan, 2013
9. Reading skill	ACTFL, 2002; Barnes, 2002; Cetinkaya, 2012
10. Writing skill	ACTFL, 2002; Street, 2003; Warden, 2015
11. Sources of learners' errors	Keshavarz, 2010; Brown, 2007
12. Language teaching approaches and methods	Cambridge English Teaching Framework, 2015; Graves, 2009; Richards, 2012
13. Language learning strategies	Brown, 2007; Wenden, 1985; Richards, 2012, 2015

14. Learners' L1 and target language similarities and differences	ACTFL, 2002; Brown, 2007; Keshavarz, 2010
15. Theories of language acquisition	ACTFL, 2002; Graves, 2009; Popko, 2005; Richards, 2012; TESOL International Association, 2010
16. Motivational strategies in language classroom	Brophy, 2004; Chen & Dornyei, 2007; Dornyei, 2001
17. Individual learner variables in language learning	Cohen & Dornyei, 2002; Dornyei, 2005; Richards, 2015
18. Dealing with mixed ability classes	Bell, 2004, 2012; Hess, 2001; Salli-Couper, 2005
19. Dealing with large classes	Locastro, 2001; Shamim, 2012
20. Age-appropriate pedagogy	Legutke, 2012; Murphy, 2014; Richards, 2015

Components of PCK

PCK is an amalgam of applied aspect of PK and educational aspect of CK that help teachers create effective pedagogical situations as well as plan and teach the subject matter area. Table 2 shows the types of knowledge that constitute the components of language teachers' PCK in the literature.

Table 2. *Components of PCK in the Literature*

Types of knowledge	Proposed by
1. Lesson planning	Cambridge English Teaching Framework, 2015; Graves, 2009; Richards, 2012, 2015, Roberts, 1998
2. Materials development	Hardwood, 2010; Ramírez Salas, 2004, Richards, 2012; Tomlinson, 2011, 2012
3. Language textbook/ materials content analysis	Hardwood, 2010; Mayring, 2014; Pingel, 1999
4. Materials evaluation in language teaching	Richards, 2012; Tomlinson, 2011, 2012
5. Materials adaptations	Richards, 2012; Tomlinson, 2011, 2012
6. Classroom management	Cambridge English Teaching Framework, 2015; Richards, 2012, 2015; Scrivener, 2012; Wright, 2005
7. Professional development	Cambridge English Teaching Framework, 2015; Harmer, 2007
8. Technology-assisted language teaching	Cambridge English Teaching Framework, 2015; Richards, 2015; Scrivener, 2012; TESOL International Association, 2008; Wright, 2005
9. Teaching listening	Cambridge English Teaching Framework, 2015; Field, 2008; Richards, 2012
10. Teaching speaking	Cambridge English Teaching Framework, 2015; Goh & Burns, 2012; Richards, 2012
11. Teaching reading	Cambridge English Teaching Framework, 2015; Hudson, 2007; Janxen, 2007; Pressley, 2006; Richards, 2012
12. Teaching writing	Cambridge English Teaching Framework, 2015; Ferris, 2012; Ferris & Hedgcock, 2005; Richards, 2012

13. Teaching vocabulary	Cambridge English Teaching Framework, 2015; Kourieos, 2014; Richards, 2015; Schmitt, 2000
14. Teaching grammar	Cambridge English Teaching Framework, 2015; Gullen, 2012; Kourieos, 2014; Myhill, Jones & Watson, 2013
15. Teaching pronunciation	Baker & Murphy, 2011; Brinton, 2012; Cambridge English Teaching Framework, 2015; Kourieos, 2014
16. Assessing language learning	Cambridge English Teaching Framework, 2015; European Profiling Grid, 2013; Harmer, 2007; Richards, 2012)

Although the studies by Larsen-Freeman and Johnson (1998), Lafayette (1993), Richards (1998), Roberts (1998), Dittrich, Shrum and Stewart (2001), and Tarone and Allwright (2005) have explored the language teacher knowledge base, they are not completely in line with the Iranian EFL teacher education policies and context. As Nguyen (2013) discusses, specific contextual factors, such as language policies of countries influence teacher professional competencies. In the same line, Kumaravadivelu (2001, 2006) discusses that any teaching context because of its particularity, calls for local exigencies and lived experiences. Additionally, the Iranian National Curriculum Document (2012) states that foreign language education in Iran should be based on Islamic and Iranian culture and values. Thus, generalizing the findings of the above-mentioned studies to high school EFL teachers and EFL teacher education in Iran may not meet the stakeholders' needs. Thus, the present study attempts to identify the components of CK and PCK that are specific to high school EFL teachers through reviewing the related literature and investigating high school EFL teachers and teacher educators' perspectives. Thus, the present study tries to answer the following research questions:

1. What are the components that constitute high school EFL teachers' CK?
2. What are the components that constitute high school EFL teachers' PCK?

Method

Participants

This research took a sequential exploratory mixed method research approach that involved a first phase of qualitative data collection and analysis, followed by a second phase of quantitative data collection and analysis that builds on the results of the first qualitative phase (Creswell, 2009). In the qualitative phase, the participants consisted of 40 high school EFL teachers teaching English at different schools in Lorestan, Ilam, Khozestan and, Hamedan provinces and 20 EFL teacher educators from different campuses of Farhangian University in

Lorestan, Khozestan, Ilam, Mazandaran and, Tehran. They were selected based on purposive sampling technique. The selection criteria were the participants' teaching experience, university degrees, and their consent to take part in the study. High school EFL teachers consisted of 25 M.A. holders and 15 Ph.D. candidates. Their teaching experience ranged from 10 to 20. EFL teacher educators consisted of four Ph.D. holders and 16 Ph.D. candidates. Their teaching experience ranged from four to ten. In the quantitative phase, a total number of 445 high school EFL teachers and teacher educators from Lorestan, Ilam, Khuzestan, Tehran, Isfahan, Kermansha, Mazandaran, Guilan, Kurdistan, and, Hamedan were selected based on convenience sampling techniques to fill in the questionnaire developed and piloted earlier. They were of both genders with six to 30 years of teaching experience and with different university degrees ranging from B.A., M.A. candidates, M.A., Ph.D. candidates to Ph.D. in the fields of teaching, literature, linguistics, and translation.

Instruments

To complement the data obtained from the literature review, semi-structured interviews were conducted with 40 high school EFL teachers and 20 EFL teacher educators educating teacher candidates at Farhangian University. Two questions were developed to elicit the interviewees' opinions with regard to what they considered the necessary components of CK and PCK for high school EFL teachers (Appendix A). The interviews were conducted in English. Each one lasted between 10 to 15 minutes.

The components of CK and PCK developed from the review of literature and complemented with the data from the interviews with high school EFL teachers and teacher educators were used to develop a 37-item questionnaire (Appendix B) with a five-Likert scale ranging from 1=completely disagree to 5= completely agree. The questionnaire covered both high school EFL teachers' components of CK (20 items) and PCK (17 items). It was given to four experienced EFL teacher educators teaching at Farhangian University for evaluation. Their professional knowledge and opinion were solicited with regards to high school EFL teacher competencies in terms of categories and the wordings of the formulated items. Based on teacher educators' feedback, some of the items were revised with regard to wordings, and some were revised because of double-barreledness. As Dornyei (2003) contends, "with double-barreled questions even if respondents do provide an answer, there is no way of knowing which part of the question the answer concerned" (p. 55).

The questionnaire was piloted to 80 stakeholders (60 high school EFL teachers, 20 teacher educators) who were chosen based on their resemblance to the target sample. The Cronbach's reliability of the questionnaire in the pilot study was 0.89.

Procedure

In the first phase of the study, to explore high school EFL teachers' CK and PCK, the related literature was reviewed, and the teachers and teacher educators were interviewed. Each interview lasted between 10 and 15 minutes. The interviews were audio recorded and later transcribed. To analyze the interviews, qualitative analyses were utilized using MAXQDA 10.

In the second phase, based items obtained from the literature review and the themes emerged from the interviews which resulted in strong agreement, a 37-item questionnaire was developed and then piloted. To validate the items and to find their underlying factors, 550 copies of the questionnaire were distributed among high school EFL teachers and teacher educators in ten provinces of Iran. The respondents were asked to mark their answers as to what extent they agree with the importance of the items to high school EFL teachers. Face to face method, emails, and telegram social network were used for questionnaire distribution. Out of the 550 distributed questionnaires, 460 questionnaires were completed and returned to the researcher. Fifteen of the questionnaires were excluded since they were incomplete. This left the researcher with 445 questionnaires for validation. Exploratory factor analysis was used to explore the factors underlying the components of high school EFL teachers' CK and PCK.

Results

Results of the Interviews

The analysis of the data gathered through interviews with high school EFL teachers pointed to 19 themes for CK. Interviews with EFL teacher educators also led to 19 themes for CK. As it can be seen in Table 3, the theme *knowledge of dealing with large classes* only emerged from the interviews with the high school EFL teachers and the theme *knowledge of dealing with mixed-ability classes* only emerged from the interviews with the teacher educators. The comparison of the results of the interviews with high school EFL teachers with the results of interviews with EFL teacher educators led to the emergence of 20 themes of CK. Table 3 summarizes the identified themes of CK emerged from the interviews with both high school EFL teachers and EFL teacher educators.

Table 3. CK Themes Emerged from the Interviews with High School EFL Teachers and Teacher Educators

Row	The themes emerged for CK	High school EFL teachers	EFL teacher educators
1	Reading	√	√
2	Speaking	√	√
3	Listening	√	√
4	Writing	√	√
5	Language teaching methods and approaches	√	√
6	Theories of language acquisition	√	√
7	Syntax	√	√
8	Semantics	√	√
9	L1 and L2 similarities and differences	√	√
10	Phonology	√	√
11	Age-appropriate pedagogy	√	√
12	Individual learner variables	√	√
13	Sources of learner's errors	√	√
14	Motivational strategies	√	√
15	Discourse	√	√
16	Dealing with large classes	√	×
17	Pragmatics	√	√
18	Morphology	√	√
19	Dealing with mixed-ability classes	×	√
20	Learning strategies	√	√

The analysis of the data gathered through interviews with high school EFL teachers pointed to 16 themes for PCK. Interviews with EFL teacher educators also led to 16 themes for PCK. As it can be seen in Table 4, the theme *knowledge of materials content analysis* only emerged from the interviews with the teacher educators and the theme *knowledge of teaching ESP* only emerged from the interviews with high school EFL teachers. Most of the interviewees believed that as most of the majors in Technical and Vocational high schools have specialized English courses, high school EFL teachers need to have competency in teaching ESP courses. The comparison of the results of the interviews with high school EFL teachers with the results of interviews with EFL teacher educators led to the emergence of 17 themes of PCK. Table 4 summarizes the identified themes of PCK emerged from the interviews with both high school EFL teachers and EFL teacher educators.

Table 4. PCK Themes Emerged from the Interviews with High School EFL Teachers and Teacher Educators

Row	The themes emerged for PCK	High school EFL teachers	EFL teacher educators
1	Lesson planning	√	√
2	Teaching listening	√	√
3	Teaching reading	√	√
4	Teaching speaking	√	√
5	Computer-assisted language teaching	√	√
6	Teaching vocabulary	√	√
7	Teaching grammar	√	√
8	Teaching pronunciation	√	√
9	Assessing language learning	√	√
10	Teaching writing	√	√
11	Classroom management	√	√
12	Professional development	√	√
13	Materials development	√	√
14	Materials evaluation	√	√
15	Materials adaptation	√	√
16	Materials content analysis	×	√
17	Teaching ESP	√	×

Results of the Questionnaire

Content knowledge

The 20 items of CK were subjected to Principal Component Analysis (PCA) using SPSS version 16. Prior to performing PCA, the suitability of data for factor analysis was assessed. The Kaiser-Meyer-Olkin Sampling Adequacy (KMO) value was .818, exceeding the recommended value of .6, and Bartlett's Test of Sphericity was statistically significant ($p=.000$) supporting the factorability of the correlation matrix.

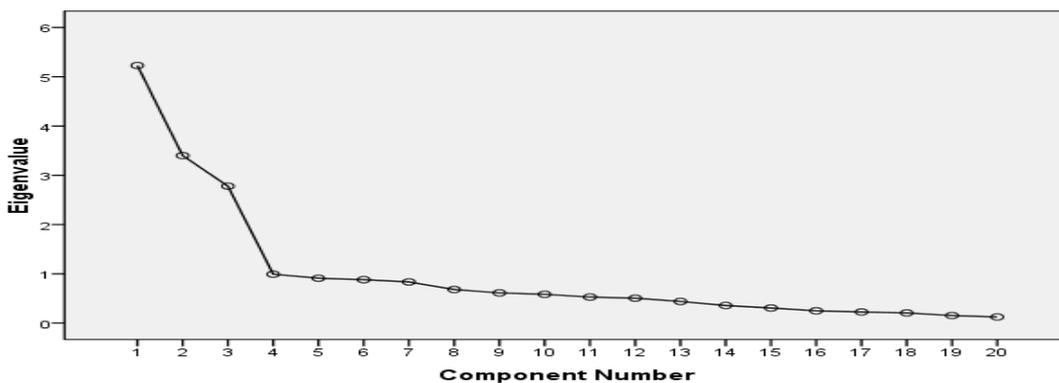
PCA analysis revealed the presence of three factors with eigenvalues exceeding 1, explaining 26.143%, 17.000%, and 13.896% of the variance respectively. These three factors explain 57.038% of the variance (Table 5).

Table 5. Total Variance Explained for CK

Components	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.229	26.143	26.143	5.229	26.143	26.143	5.163	25.816	25.816
2	3.400	17.000	43.142	3.400	17.000	43.142	3.410	17.051	42.867
3	2.779	13.896	57.038	2.779	13.896	57.038	2.834	14.171	57.038

Extraction Method: Principal Component Analysis

This was further supported by inspecting the Screeplot which shows a break after the third component. Catell (1966) as cited in Pallant (2013) recommends retaining all factors above the elbow, or break in the plot, as these factors explain most of the variance in the data set. The results suggested that three factors could be extracted from the data (Figure1).

**Figure 1.** Screeplot for CK Items

PCA with Varimax Rotation on the items of CK showed the items were loaded on three factors, with ten items on factor one, six items on factor two, and four items on factor three (Table 6).

Table 6. Rotated Component Matrix for CK

Items	Components		
	Factor 1	Factor 2	Factor 3
Q12	Language teaching approaches and methods	.879	
Q11	Learners' sources of errors	.854	
Q20	Age-appropriate pedagogy	.825	
Q13	Theories of language acquisition	.762	
Q19	Dealing with mixed ability classes	.756	

Q14	Learning strategies	.686	
Q15	Motivational strategies in language classroom	.637	
Q18	L1 and L2 similarities/differences in phonology and601	
Q16	Individual learner variables in language learning	.598	
Q17	Dealing with large classes	.453	
Q2	Semantics	.884	
Q4	Phonology	.869	
Q1	Syntax	.805	
Q3	Morphology	.727	
Q5	Discourse	.711	
Q6	Pragmatics	.401	
Q9	Reading		.885
Q8	Speaking		.872
Q7	Listening		.838
Q10	Writing		.751

Thus, the obtained factors from the factor analysis were examined through consultation with three EFL experts. They named the items loaded on factor one as knowledge of *principles of language teaching methodology*, the items loaded on factor two as knowledge of *linguistics* and, the items loaded on factor three as knowledge of *language proficiency* (Table 7).

Table 7. High School EFL Teachers' CK

Rank of the factor	Types of knowledge	Items	Item Ranks
1	Principles of language teaching methodology	1. Language teaching approaches and methods	.879
		2. Learners' sources of errors	.854
		3. Age-appropriate pedagogy	.825
		4. Theories of language acquisition	.762
		5. Dealing with mixed ability classes	.756
		6. Language learning strategies	.686
		7. Motivational strategies in language classroom	.637
		8. L1 and L2 similarities/differences in phonology....	.601
		9. Individual learner variables in language learning	.598
		10. Dealing with large classes	.453
2	Linguistics	1. Semantics	.884
		2. Phonology	.869
		3. Syntax	.805
		4. Morphology	.727
		5. Discourse	.711
		6. Pragmatics	.401
3	Language proficiency	1. Reading	.885
		2. Speaking	.872
		3. Listening	.838
		4. Writing	.751

Pedagogical Content Knowledge

The 17 items of PCK were also subjected to Principal Component Analysis (PCA) using SPSS version 16. Prior to performing PCA, the suitability of data for factor analysis was carried out. The Kaiser-Meyer-Olkin Sampling Adequacy (KMO) value was .882 and Bartlett's Test of Sphericity was statistically significant ($p=.000$).

PCA analysis showed the presence of three factors with eigenvalues exceeding 1, explaining 38.502%, 12.818%, and 8.753% of the variance, respectively. These three factors explain 60.073% of the variance (Table 8).

Table 8. Total Variance Explained for PCK

Components	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of variance	Cumulative%
1	6.545	38.502	38.502	6.545	38.502	38.502	6.507	38.277	38.277
2	2.179	12.818	51.320	2.179	12.818	51.320	2.186	12.860	51.137
3	1.488	8.753	60.073	1.488	8.753	60.073	1.519	8.936	60.073

This was further supported by inspecting the Screeplot which shows a break after the third component. The results suggested that three factors could be extracted from the data. (Figure 2)

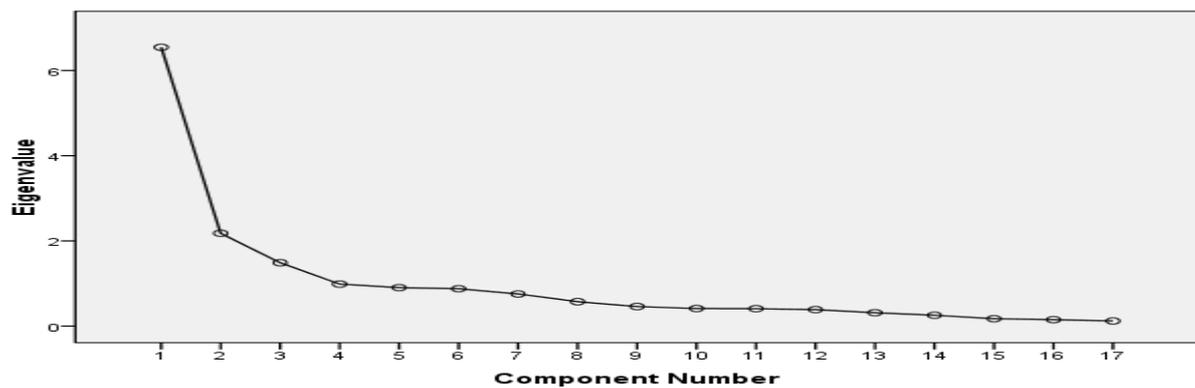


Figure 2. Screeplot for PCK Items

PCA analysis with Varimax Rotation on the items of PCK showed the items loaded on three factors, with ten items on factor one, three items on factor two, and four items on factor three (Table 9).

Table 9. *Rotated Component Matrix for PCK*

	Items	Components		
		Factor1	Factor2	Factor3
Q12	Teaching reading	.875		
Q11	Teaching speaking	.860		
Q10	Teaching listening	.848		
Q15	Teaching vocabulary	.847		
Q14	Teaching grammar	.841		
Q16	Teaching pronunciation	.839		
Q13	Teaching writing	.838		
Q17	Assessing language learning	.811		
Q8	Technology-assisted language teaching	.701		
Q9	Teaching ESP	.536		
Q6	Classroom management		.861	
Q7	Lesson planning		.851	
Q	Professional development		.841	
Q4	Materials evaluation			.673
Q2	Materials development			.573
Q5	Materials adaptation			.553
Q3	Textbook/materials content analysis			.402

The obtained factors from the factor analysis were also examined through consultation with three EFL experts. They named the items loaded on factor one as knowledge of *teaching and assessing the components of the curriculum*, the items on factor two as knowledge of *developing, planning, and managing language teaching*, and the items on factor three as knowledge of *developing and evaluating instructional materials* (Table 10).

Table 10. High School EFL Teachers' PCK

Rank of the factor	Types of knowledge	Items	Item ranks
1	Teaching and assessing the components of the curriculum	1. Teaching reading	.875
		2. Teaching speaking	.860
		3. Teaching listening	.848
		4. Teaching vocabulary	.847
		5. Teaching grammar	.841
		6. Teaching pronunciation	.839
		7. Teaching writing	.838
		8. Assessing language learning	.811
		9. Technology-assisted language teaching	.701
		10. Teaching ESP	.536
2	Developing, planning, and managing language teaching	1. Classroom management	.861
		2. Lesson planning	.851
		3. Professional development	.841
3	Developing and evaluating instructional materials	1. Materials evaluation	.673
		2. Materials development	.578
		3. Materials adaptation	.553
		4. Textbook/materials content analysis	.402

Discussion

This study aimed to explore and validate the components of high school EFL teachers' CK and PCK. To the best of researchers' knowledge, no study has been done to encompass all of the components of this study. However, the results of the present study are in line with some research studies, each focusing on one or more of the components of this study.

Content Knowledge

The result of factor analysis on CK items showed three underlying factors for CK items. It showed that the most important factor for high school EFL teachers is knowledge of the *principles of language teaching methodology*. This is in line with Cambridge English Teaching Framework (2015) that states every language teacher should have knowledge of language teaching methodology to have effective teaching. According to this framework, knowledge of the principles of language teaching methodology includes knowledge of methods and approaches to language teaching, learning strategies, teaching large classes, teaching mixed ability classes, theories of language acquisition, and age-appropriate pedagogy. Moreover, the findings also confirm ACTFL (2002) that states language teachers should know the differences/similarities between target language and learners' mother tongue to help them plan their language teaching accordingly. ACTFL also states that EFL teachers should demonstrate an understanding of language acquisition theories and use this knowledge to create a supportive classroom learning environment.

The results also indicated that the knowledge of *linguistics* is the second important factor for high school EFL teachers. This confirms ACTFL (2002) that contends that language teachers should have a good understanding of the linguistic features of the target language system to explain the major features of the target language grammar. They should also understand and describe target language features for producing coherence in spoken and written discourse and pragmatic features of the target language discourse (p.10). Similarly, TESOL International Association (2010) states that "language teachers need a conscious knowledge of language as a system to be effective language teachers, and they use knowledge of these interrelated aspects of language as they support English language learners' acquisition of English" (p.27). In the same line, Bartels (2009) emphasizes the importance of knowledge about language, as an important aspect of language teachers' knowledge because of the fact that it is vital to effective teaching.

The results also showed that *language proficiency* is the third important factor for high school EFL teachers. This finding is in line with the findings of Murdoch (1994) and Richards (2012) who believed language proficiency is the basis of professional practice for EFL teachers. Murdoch (1994) called language proficiency as “the bedrock of non native EFL teachers’ professional confidence” (p. 254). Similarly, ACTFL (2002) emphasized the fact that EFL teachers should demonstrate a high level of proficiency in the target language to be able to teach the language. This finding is because of the fact that non-native language teachers, depending on the teaching context and language proficiency of the group of learners being taught need certain level of proficiency to have effective teaching.

Pedagogical Content Knowledge

The results of factor analysis on PCK items also showed three underlying factors for PCK. It showed that knowledge of *teaching and assessing the components of high school EFL curriculum* is the most important factor for these teachers. As the results indicate, high school EFL teachers should be able to teach and assess reading, speaking, listening, vocabulary, grammar, pronunciation, and writing in high schools through technology-assisted language teaching. They should also have enough knowledge to teach and assess ESP at Technical and Vocational high schools as most majors at these schools have specialized English courses. This result is in line with a number of research studies. For instance, TESOL International Association (2008) and Mishra and Koehler (2006) specify that every language teacher should have enough knowledge of technology-assisted language teaching to teach a language. Cambridge English Teaching Framework (2015) and European Profiling Grid (2013) point out that language teachers should have enough competencies to teach and assess language skills (reading, listening, speaking, and writing) and language systems (vocabulary, grammar, and pronunciation).

The result also showed that knowledge of *developing, planning, and managing language teaching* is the second most important factor for high school EFL teachers. This knowledge includes knowledge of classroom management, lesson planning, and professional development. The result of this study is in line with a number of research studies. As for the knowledge of classroom management, Cambridge English Teaching Framework (2015), Richards (2015), and Wright (2005) emphasize the importance of this knowledge for language teachers. With regard to lesson planning, Richards (2015) states that planning a lesson before teaching it is considered essential to teach an effective lesson (p. 175). In the

same line, Graves (2009) and Roberts (1998) point out that knowledge of lesson planning is a key competency for language teachers. With regard to knowledge of professional development, as cited in Cambridge English Teaching Framework (2015), knowledge of action research, knowledge of reflective teaching, knowledge of teacher research, and knowledge of classroom observation are the key factors for teachers' learning and professional development. Rock and Wilson (2005) also believe that knowledge of lesson study helps teacher learning and development. ACTFL (2002), Richards (2015), and TESOL International Association (2008) emphasize the importance of language teachers' knowledge of professional development as an important aspect of language teachers' knowledge.

According to findings of this study, knowledge of *developing and evaluating instructional materials* is the third important factor for high school EFL teachers. This knowledge includes knowledge of materials evaluation, materials development, materials adaptation, and textbook/materials content analysis. This finding is in line with Cambridge English Teaching Framework (2015), Tomlinson (2011, 2012) and Hardwood (2010) who emphasized the importance of knowledge of developing, adapting, evaluating instructional materials for language teachers. In the same line, every year, the ministry of education wants teachers of all majors including EFL teachers to evaluate the present instructional materials and report their evaluation to the Ministry of Education to improve the instructional materials for the next year. There is also a festival of materials development for teachers in the Ministry of Education. It asks teachers to develop instructional materials, especially E-content materials based on National Curriculum Development Document.

Conclusion

The findings of the present study can have theoretical and practical implications for high school EFL teacher education and teacher evaluation. At the theoretical level, this study may be the only piece of research that has conceptualized high school EFL teachers' knowledge of CK and PCK. At the practical level, the findings can be used in high school EFL teacher education, training and evaluation. Current program of pre-service and in-service EFL teacher education can benefit from the findings of this study in the design of EFL teacher preparation program. In addition, the findings can also be used as a yardstick to examine the professional knowledge of present and prospective high school EFL teachers. For example, policy makers can decide if an individual is suitable to be a high school EFL teacher based on her/his knowledge in each of the components of CK and PCK.

This study has some limitations. First, it did not use true randomization of participants in the questionnaire administration because of accessibility problems. Second, EFL high school textbooks were not considered in the data collection process as some of the textbooks were not published at the time.

One of the delimitations of this study is that the results are only generalizable to high school EFL teachers. Another delimitation of this study is that among the four teacher professional competencies stated in TECDD of Farhangiyān University, this study only explored the components of CK and PCK which are specific to high school EFL teachers. More research is needed to explore high school teachers' PK and GK.

References

- ACTFL. (2002). *Program standards for the preparation of foreign language teachers*. New York: ACTFL.
- Baker, A., & Murphy, J. (2011). Knowledge base of pronunciation teaching: Staking out the territory. *TESL Canada Journal*, 28 (2), 29-50.
- Barnes, A. (2002). Maintaining language skills in pre-service training for foreign language teachers. In H. Trappes-Lomaz & G. Ferguson (Eds.), *Language in language teacher education* (pp. 199–217). Amsterdam: John Benjamins.
- Bartels, N. (2009). Knowledge about language. In A. Burns & J. C. Richards (Eds.), *The Cambridge guide to second language teacher education* (pp. 125-134). Cambridge: CUP.
- Bell, J. (2004). *Teaching multilevel classes in ESL*. Toronto: Pippin Publishing.
- Bell, J. (2012). Teaching mixed level classes. In A. Burn & J.C. Richards (Eds.), *Pedagogy and practice in second language teaching* (pp. 86-94). Cambridge: CUP.
- Brinton, D.M. (2012). Pronunciation instruction. In A. Burn & J.C. Richards (Eds.), *Pedagogy and practice in second language teaching* (pp. 246-257). Cambridge: CUP.
- Brophy, J. E. (2004). *Motivating students to learn*. Mahwah: Lawrence Erlbaum.
- Brown, D. H. (2007). *Principles of language learning and teaching*. New York: Longman.
- Butler, Y. G. (2004). What level of English proficiency. Do elementary school teachers need to attain to teach EFL? Case studies from Korea, Taiwan, and Japan. *TESOL Quarterly*, 38(2), 245-275.
- Cambridge English Teaching Framework. (2015). *Cambridge English teaching framework*. Cambridge: CUP.

- Cetinkaya, Y. B. (2012). Reading experiences of nonnative English speaking pre-service English teachers: A Turkish case. *TESOL Journal* 3(1), 17-32.
- Chen, H. F., & Dornyei, Z. (2007). The use of motivational strategies in language instruction: The case of EFL teaching in Taiwan. *Innovation in Language Learning and Teaching*, 1(1), 153-174.
- Cohen, A. D., & Dornyei, Z. (2002). Focus on the language learner: Motivation, styles, and strategies. In N. Schmitt (Ed.), *Applied linguistics* (170-192). London: Arnold.
- Creswell, J. W. (2009). *Qualitative, quantitative and mixed methods approach*. New York: Sage.
- Delahunty, G. P., & Garvey, J. J. (2010). *The English language from sound to sense*. Colorado: Parlor Press.
- Dittrich, J., Shrum, J., & Stewart, C. (2001). Pedagogical knowledge: The perspective of classroom teachers. In R. Terry (Ed.), *Agents of change in a changing age* (pp. 47-78). Lincolnwood: National Textbook Company.
- Dornyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge: CUP.
- Dornyei, Z. (2003). *Questionnaire in second language research*. London: Lawrence Erlbaum Associates.
- Dornyei, Z. (2005). *The psychology of language learner*. New York: Routledge.
- European Profiling Grid. (2013). Retrieved from http://www.epg-project.eu/wp-content/uploads/The-EPG-PDF-publication_EN.pdf
- Ferris, D. R. (2012). Writing instruction. In A. Burns & J. C. Richards (Eds.), *Pedagogy and practice in second language teaching* (pp.226-225). Cambridge: CUP.
- Ferris, D. R., & Hedgcock, J. S. (2005). *Teaching ESL composition*. New Jersey: Lawrence Erlbaum.
- Field, J. (2008). *Listening in language classroom*. Cambridge: CUP.
- Glisan, E. W. (2013). On keeping the target language in language teaching: A bottom-up effort to protect the public and students. *Modern Language Journal*, 97(2), 541–544.
- Goh, C. M., & Burns, A. (2012). *Teaching speaking. A holistic approach*. New York: CUP.
- Graves, K. (2009). The curriculum of second language teacher education In A. Burns & J. C. Richards (Eds.) , *Second language teacher education* (pp. 115-124). Cambridge: CUP.
- Gullen, R. (2012). Grammar instruction. In A. Burns & J.C. Richards (Eds.), *Pedagogy and practice in language teaching* (112-119). Cambridge: CUP.

- Hardwood, N. (2010). Issues in materials development and design. In N. Hardwood (Ed.), *English language teaching and materials* (pp. 3-32). Cambridge; CUP.
- Harmer, J. (2007). *The practice of English language teaching*. Harlow: Pearson.
- Hess, N. (2001). *Teaching large multilevel classes*. Cambridge: CUP.
- Hudson, T. (2007). *Teaching second language reading*. Cambridge: CUP.
- Iranian National Curriculum Document. (2012). Ministry of Education, Tehran.
- Janxen, J. (2007). Preparing teachers of second language readers. *TESOL Quarterly*, 41(4), 707-729.
- Kasper, G. (2001). Classroom on interlanguage pragmatics. In K. Rose, & G. Kasper (Eds.), *Pragmatics in language teaching* (pp. 13-32). New York: CUP.
- Keshavarz, M. H. (2010). *Contrastive analysis and error analysis*. Tehran: Rahnama.
- Kourieos, S. (2014). The knowledge base of primary EFL teachers' perceptions. *Journal of Language Teaching and Research*, 5(2), 291-300.
- Kumaravadivelu, B. (2001). Toward a post-method pedagogy. *TESOL Quarterly*, 35(4), 537-560.
- Kumaravadivelu, B. (2006). *Understanding language teaching. From method to post-method*. London: Lawrence Erlbaum Associates.
- Lafayette, R. C. (1993). Subject-matter content: What every foreign language teacher needs to know. In G. Guntermann (Ed.), *Developing language teachers for a changing world* (pp. 125-157). Lincolnwood: National Textbook Publisher.
- Larsen-Freeman, D., & Johnson, K. (1998). Reconceptualizing the knowledge base of language teacher education. *TESOL Quarterly*, 32(3), 397-417.
- Legutke, M. (2012). Teaching teenagers. In A. Burns & J.C. Richards (Eds.), *Pedagogy and practice in language teaching* (112-119). Cambridge: CUP.
- Locastro, V. (2001). Large classes and student learning. *TESOL Quarterly*, 34(3), 493-496.
- Mayring, P. (2014). *Qualitative content analysis. Theoretical foundation, basic procedures and software solution*. New York: Klagenfurt.
- Mishra, p., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A new framework for teacher knowledge. *Teachers College Record*, 108(6), 1017-1054.
- Murphy, V. (2014). *Second language learning in the early school years: Trends and contents*. Oxford: OUP.
- Murdoch, G. (1994). Language development provision in teacher training curricula. *ELT Journal*, 48(3), 253-265.

- Myhill, D., Jones, S., & Watson, A. (2013). Grammar matters: How teachers' grammatical knowledge impacts on the teaching of writing. *Teaching and Teacher Education, 36*(2), 77-91.
- Nguyen, M. (2013). The curriculum for English language teacher education in Australian and Vietnamese universities. *Australian Journal of Teacher Education, 38*(11), 33-53.
- Osama, V., & Balbay, S. (2004). Investigating the decision-making skills of cooperating teachers and students teachers of English in Turkish context. *Teaching and Teachers Education, 20*, 745-758.
- Pallant, J. (2013). *SPSS survival manual*. Berkshire: Open University Press.
- Pingel, F. (1999). *UNESCO guide o textbook research and textbook revision*. Hannover: Verlag.
- Popko, J. (2005). How MA TESOL students use knowledge about language in teaching ESL classes. In N. Bartels (Ed.), *Applied linguistics and language teacher education* (pp.387-403). New York: Springer.
- Pressley, M. (2006). *Reading instruction that works: The case of balanced teaching*. New York: Guilford Press.
- Ramirez Salas, M. (2004). English teachers as materials developers. *Revista, 4*(2), 1-17.
- Richards, J.C. (1998). *Beyond training*. Cambridge: CUP.
- Richards, J. C. (2012). Competence and performance in language teaching. In A. Burns & J.C. Richards (Eds.), *Pedagogy and practice in language teaching* (46-56). Cambridge: CUP.
- Richards, J. C. (2015). *Key issues in language teaching*. Cambridge: CUP.
- Roberts, J. (1998). *Language teacher education*. London: Arnold.
- Rock, T. C., & Wilson, C. (2005). Improving teaching through lesson study. *Teacher Education Quarterly, 4*(2), 77-92.
- Salli-Couper, D. (2005). *Coping with the problems of mixed ability classes*. Retrieved from <http://iteslj.org/Techniques/Salli-Copur-MixedAbility.html>
- Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge. CUP.
- Scrivener, J. (2012). *Classroom management techniques*. Cambridge: CUP.
- Shamim, F. (2012). Teaching large classes. In A. Burns & J.C. Richards (Eds.), *Pedagogy and practice in language teaching* (95-102). Cambridge: CUP.
- Street, C. (2003). Pre-service teachers' attitudes about writing and learning to teach writing: Implications for teacher educators. *Teacher Education Quarterly, 30*(3), 33-50.

- Tarone, E., & Allwright, D. (2005). Language teacher learning and student language learning: Shaping the knowledge base. In D.J. Tedick (Ed.), *Second language teacher education* (pp. 5-23). New York: Lawrence Erlbaum.
- Teacher Education Curriculum Development Document of Farhangian University. (2012). Farhangian University Press.
- TESOL International Association. (2008). *TESOL technology standards framework*. Virginia: TESOL.
- TESOL International Association. (2010). *TESOL P-12 professional teaching standards*. Alexandria. TESOL.
- Tomlinson, B. (2011). Introduction. In B. Tomlinson (Ed.), *Materials development in language teaching* (pp. 1-34). Cambridge: CUP.
- Tomlinson, B. (2012). Materials development. In A. Burns & J. C. Richards (Eds.), *Pedagogy and practice in second language teaching* (pp.269-278). Cambridge: CUP.
- Warden, D. (2015). Developing writing concepts for teaching purposes: Pre-service L2 writing teachers' developing conceptual understanding of parallelism. *Journal of Second Language Writing*, 30(4), 19-30.
- Wenden, A. (1985). Learner strategies. *TESOL Newsletter*, 19 (5), 1-7.
- Wright, T. (2005). *Classroom management in language education*. New York: Palgrave.

Appendix A

1. What are the components that constitute high school EFL teachers' CK?
2. What are the components that constitute high school EFL teachers' PCK?

Appendix B

High school EFL teacher <input type="checkbox"/> EFL teacher educator <input type="checkbox"/>	Degree: BA in English <input type="checkbox"/> MA in English <input type="checkbox"/> PhD in English <input type="checkbox"/>	Years of teaching experience:				
<p>Dear Participants: The aim of this questionnaire is to EXPLORE THE IMPORTANCE OF THE FOLLOWING KNOWLEDGE FOR HIGH SCHOOL EFL TEACHERS. Please check the box that best describes your view on each item. Thank you in advance.</p> <p>The numbers 1 to 5 stand for:</p>						
Strongly Disagree	Disagree	undecided	Agree	Strongly Agree		
1	2	3	4	5		
Row	High School EFL Teachers' Areas of Competencies	The Importance of the Knowledge for EFL teachers				
	Content Knowledge (Specific to each major)	1	2	3	4	5
1	Knowledge of syntax is important for high school EFL teachers.					
2	Knowledge of semantics and vocabulary is important for high school EFL teachers.					
3	Knowledge of morphology is important for high school EFL teachers.					
4	Knowledge of phonology is important for high school EFL teachers.					
5	Discourse knowledge is important for high school EFL Teachers.					
6	Pragmatic knowledge is important for high school EFL teachers.					
7	Knowledge of listening comprehension is important for high school EFL teachers.					
8	Knowledge of speaking English is important for high school EFL teachers.					
9	Knowledge of English reading comprehension is important for high school EFL teachers.					

10	Knowledge of writing is important for high school EFL teachers.					
11	Knowledge of sources of learners' errors is important for high school EFL teachers.					
12	Knowledge of language teaching approaches and methods is important for high school EFL teachers.					
13	Knowledge of theories of language acquisition is important for high school EFL teachers.					
14	Knowledge of language learning strategies is important for high school EFL teachers.					
15	Knowledge of motivational strategies in language classroom is important for high school EFL teachers.					
16	Knowledge of individual learner variable in language learning is important for high school EFL teachers.					
17	Knowledge of dealing with large language classes is important for high school EFL teachers					
18	Knowledge of L1 (Persian) and L2 (English) similarities/differences in phonology, and etc. is important for high school EFL teachers.					
19	Knowledge of dealing with mixed ability (proficiency) classes is important for high school EFL teachers.					
20	Knowledge of age-appropriate pedagogy in language teaching is important for high school EFL teachers.					
	Pedagogical Content Knowledge (Specific to each major)	1	2	3	4	5
1	Knowledge of lesson planning in language teaching is important for high school EFL teachers.					
2	Knowledge of materials development in language teaching is important for high school EFL teachers.					
3	Knowledge of language textbooks/ materials content analysis is important for High school EFL teachers.					
4	Knowledge of materials evaluation is important for high school EFL teachers					
5	Knowledge of materials adaptation is important for high school EFL teachers					
6	Knowledge of classroom management in language teaching in important for high school EFL teachers.					

7	Knowledge of professional development is important for high school EFL teachers.					
8	Knowledge of technology-assisted language teaching is important for high school EFL teachers.					
9	Knowledge of teaching English for Specific Purposes (ESP) is important for high school EFL teachers.					
10	Knowledge of teaching listening is important for high school EFL teachers					
11	Knowledge of teaching speaking is important for high school EFL teachers.					
12	Knowledge of teaching reading is important for high school EFL teachers					
13	Knowledge of teaching writing is important for high school EFL teachers					
14	Knowledge of teaching grammar is important for high school EFL teachers					
15	Knowledge of teaching vocabulary is important for high school EFL teachers.					
16	Knowledge of teaching pronunciation and intonation is important for high school EFL teachers.					
17	Knowledge of assessing language learning including listening, speaking, reading, writing, grammar, vocabulary, and pronunciation is important for high school EFL teachers.					