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Realization and Development of the English Language Teachers' Pedagogical Competence: A Principal Component Analysis

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Abstract

The present study aimed at realizing and developing a scale and a model of English language teachers' pedagogical competence (ELTPC). By reviewing the related literature and adapting Thomas's (1987) language teacher competence, TESOL (2010) standards of professional EFL teachers, and teaching skills and model of pedagogical competence developed by Olsson, Martensson, and Roxa (2010) resulted in a 5-point Likert scale questionnaire consisting of seven constructs, namely preparation, management, teaching, subject mastery, assessment, attitude, and belief with 87 variables. The questionnaire underwent the scrutiny of experts' opinion and reliability estimates, which resulted in an instrument of 60 variables for the constructs. Next, the constructs were validated with 320 high school English teachers through a principal components analysis carried out via exploratory factor analysis. The result showed the constructs enjoyed high factor loadings, and with seven variables removed from the questionnaire, a 53-variable scale was developed. Finally, a model was developed based on the seven-construct questionnaire of ELTPC. The researcher hopes that English teachers and the educational system monitor, assess, and improve the quality of teaching based on the developed scale and model of ELTPC.

Keywords: pedagogical competence, English language teachers, teacher education, exploratory factor analysis, principal components analysis

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1. Introduction

Language teachers are believed to be very influential in the second language (L2) teaching and learning process and carry out a heavy responsibility in their classrooms. Being considered the key players in classrooms, teachers need to be professionals to affect the success of students as they deal with the system approach of instruction in an outcome-based curriculum. The teaching profession involves particular knowledge and abilities. In fact, it is a professional designation which needs flexibility, competitiveness, and good leadership abilities, which can come from individual ability and talent (Nur Mustafa, 2013).

Teachers' pedagogical competences (TPC), among other competences, is the heart of student's language learning and plays a vital role in student's learning achievements and performance at all stages of learning. According to Wright and Horn (2013), education can be improved by enhancing teacher's competence. It seems that, regardless of the personal differences in their classroom's context, competent teachers are effective with students of all achievement levels. Thus, pedagogy as defined by Kirchgasler (2018) refers to the tools and scientific methods that fill the achievement gap and improve the personal quality and learning achievement. In this regard, understanding the condition of learners' environment is a commitment to design the challenge into learning management opportunity in the classroom (Carter, Richmond, & Floden, 2018). Furthermore, Shojaei, Fazilatfar, and Samavarchi (2021) argue that not only do foreign language teachers need to be characterized on the basis of the subject they teach, but also the context in which they are situated. They cannot simply be presented with a set of procedures and methodology to be carried out in their classrooms in order to achieve successful outcomes.

With the assessment of pedagogical competence gradually being professionalized in the last 30 years, contribution to creating good conditions for careful and qualified assessment of pedagogical competence in connection with student advancement is a goal for quality teaching. It means that the teachers should base their work on a conscious pedagogical outlook; they need to be aware of the preconditions of student learning, their prior knowledge, and their learning styles (Karlsson, 2010).

Since pedagogical competence plays a dominant role in the quality of teaching and the learning enhancement of the learners, the whole related literature supports the issue. The traditional view of the ELTPC is a problem of teaching practice when teachers develop teaching situation to function and create conditions for learning through knowledge, methods, and actions. Altering the traditional concept of pedagogical competence that considers it as merely teaching skill or ability, Thomas (1987) adds more dimensions to ELTPC. To him, as displayed in Figure 1, teaching is not the only determining factor; teacher's managerial and disciplinary, preparatory and planning, and assessment and monitoring abilities are also critical.

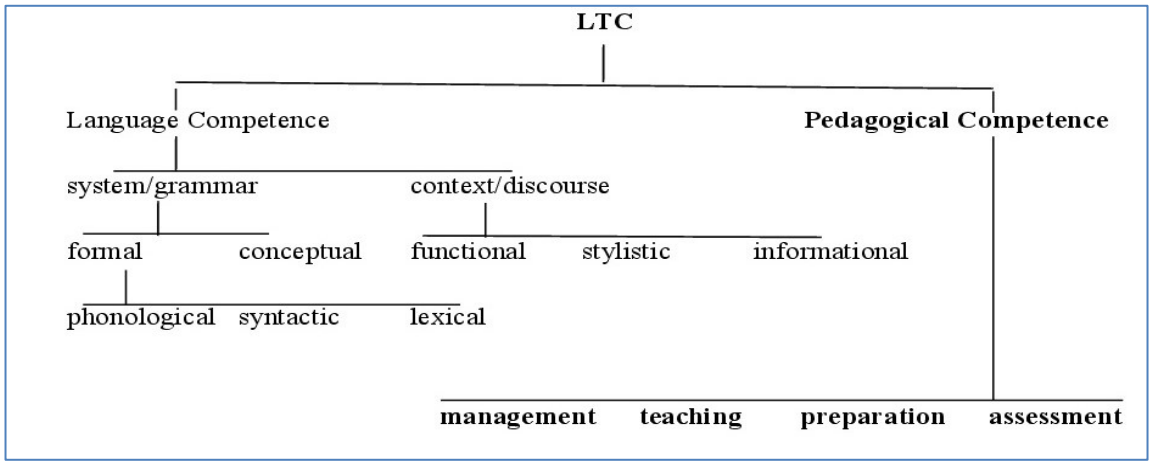

Figure 1. Langugae teacher competence (Thomas, 1987)

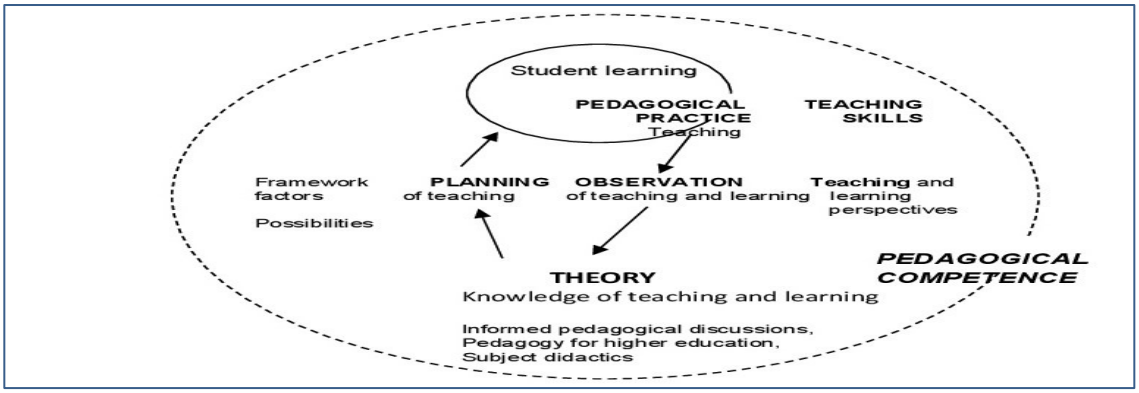

Figure 2. TESOL standards for P-12 teacher education programs. Adopted from the TESOL/NCATE standards for the recognition of initial TESOL programs in P–12 ESL teacher education (p. 20)

In addition, according to TESOL (2010), the competence of EFL teacher comprises five domains which include *language, culture, instruction, assessment,* and *professionalism* all of which are considered as the core components of the EFL teachers' competence. As Burton (2007) argues, "language and culture are considered as foundational knowledge domain in which teachers must be competent. Moreover, teaching competence is applied in the instruction and assessment domains. Thus, the four outer domains form the content and skill areas of TESOL" (p.30), and their intersection in each teacher's performance represents the practice of ELTPC. Figure 2 presents TESOL standards.

Olsson, Martensson, and Roxa (2010) also certify that pedagogical competence (PC) enjoys a much broader concept than that of mere teaching skill. In a model developed by the authors based on Kolb's (1984) Learning Cycle, PC involves four essential aspects: *pedagogical practice* or actual teaching activities related to student learning; *observation* of teaching and student learning; *theory* or theoretical knowledge of teaching and student learning; and *planning* as a means for improved pedagogical practice (Figure 3).

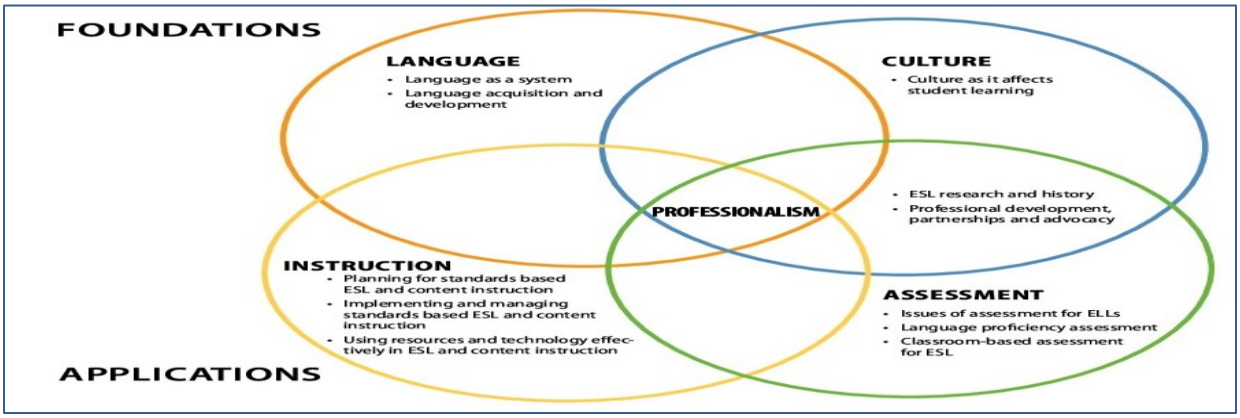

Figure 3. Teaching skills and PC (Olsson et al., 2010)

As seen, there has been a clear development from what was previously referred to as teaching ability or skill to a more comprehensive definition of pedagogical competence implying that pedagogical competence is a part of professional competence. It can be inferred that there is a correspondence between the teachers' acknowledgment of what and how students learn, along with the conditions for that learning, and the teachers' success in teaching.

Suciu and Mata (2011) also propose the framework of professional competences that includes six categories of methodology, communication and relationship, student assessment, psycho-sociology, technology, and career management. Accordingly, the authors developed taxonomies of pedagogical competence that aimed at demonstrating

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the important facets of competence as various perspectives with many implications such as cognitive, managerial, psychological, ICT, personal, social, etc.

1.1 Statement of the Problem

The assessment of pedagogical activities of EFL teachers, as feedback on the quality of teaching, is an essential element in improving the process of teaching, as well as EFL students' knowledge and the entire educational system as such. However, the major cause for the gap in pedagogical practices is that the required pedagogical competence in EFL teachers are not clearly known due to the lack of a scale-based system based on which the ELTPC can be quantifiably measured. This issue justifies any research in this regard and the present study is an attempt to develop and realize a scale of ELTPC which shall take into consideration what both research and well-tried experience have demonstrated to promote learners' learning.

The evaluation of pedagogical activities of English language teachers provide a clear-cut account of what is lacking in pedagogy that stops or weakens the process of learning. Numerous studies and reviews have been carried out and some models have been proposed (e.g., Ryegard, Apelgren, & Olsson, 2010; Stes, Clement, & Van Petergem, 2007) in this regard. However, the research conducted so far does not yield a pervasive account of ELTPC components. Proposing general constructs of the ELTPC without going into details of the issue, the research studies have not yet provided a clear-cut criterion based on which the ELTPC can be specified. This issue contains papers that are, for the most part, qualitative in nature, drawing on the contextual approach (Barcelos & Kalaja, 2011).

Perceiving no quantitative investigation has been carried out on the qualitative nature of ELTPC, the researcher believes that this entity can be quantified, and an objectified account of language teachers' pedagogical concept can be presented. Additionally, the researcher thought that teacher belief about self, teaching, learning, and research (Tapia, 2013) and as a tool to deal with the problems and questions of the teaching and learning possesses (Kalaja, 2011) is a very important component of ELTPC that is missing in previous studies and models.

In addition, having an attitude that best promotes student learning can be seen as the cornerstone of ELTPC (Apelgren & Giertz, 2010). The authors argue that a general academic attitude towards teaching is significant, which can be expressed by action as it forms a fundamental pedagogical outlook that can be put into practice. However, the component of attitude is explicitly added to the components of ELTPC in the present study as it was a missing component in the previous studies or was not directly expressed as a single component.

Therefore, what is absent in the literature is an inclusive consideration and evaluation of possible factors accounted as ELTPC. All studies on TPC have investigated merely three or four components. For example, Thomas's study (1987) is limited only to the components of management, teaching, preparation, and assessment, and the study carried out by Apelgren and Giertz (2010) is limited to consider only attitude, knowledge, and skill. Thus, no one study was found, to the best of the researcher's knowledge, to have considered an approximately comprehensive components of ELTPC altogether. Therefore, what the current research follows to do is evaluating a more comprehensive account of factors including preparation, preparation, management, subject mastery, teaching, assessment, attitude, and belief as the constructing corner stones of the TPC since the researcher was sure that it is so broad and comprehensive that bears a multilateral dimension.

2. Review of the Literature

The researcher analyzed a substantial number of articles, field studies, and research papers published in the related literature. What follows is a brief collection of experimental studies carried out foreign and second language contexts abroad and in foreign language context of Iran.

2.1 ELTPC Abroad

Exploring the teaching competence in Ghana with 163 regular school teachers in a quantitative approach, Kuyini, Asiama, Kumar, and Alhassan (2016) found that adapting instructional materials, behavior management were important competencies. They also recognized that factors such as the availability of teaching materials, supporting teachers by providing them with more training on pedagogical competences are crucial provisions which augment teachers' efficacy to sustain student learning.

Naz (2017) also tried to explore the professional competence of public secondary schools male and female teachers in Pakistan. The result of the study revealed that male and female teachers had significantly different professional

competence and there was a significant difference between students' achievements scores. Panggua, Wello, Jabu, and Macdonald (2017) also explored the EFL high school teachers' personal competences in Indonesia. They found the capability of having a stable personality, being noble, wise and dignified as the key components of personal competences.

In a study of TPC through observations and interviews, Emiliasari (2018) found that unlike junior teachers who had no reflective action in teaching and had less understanding of classroom action, senior teachers with higher training enjoyed a superior pedagogical competence in terms of classroom management, understanding the students' characteristics, curriculum development, lesson plan, and teachers' talk resulting in their greater practice of pedagogical competence in the classrooms.

Furthermore, in a survey study using Delphi method, Swank and Houseknecht (2019) tried to explore teaching competences. They finally found knowledge, skills, professional behaviors, and dispositions are the categories of teaching competences. They also emphasized that teachers should be provided with both education and training so that they would be able to develop their needed competences to have effective teaching that yields students learning.

Nehls, König, and Kaiser (2020) in an attempt to identify different profiles of teachers' general pedagogical knowledge (GPK) as a central component of their competence through a mixed Rasch model found teachers who had undergone training for teaching had a higher chance of belonging to the profile of GPK. The results also revealed that the teachers with and without training differed significantly in their epistemological as well as teaching and learning beliefs. Most importantly, they differed significantly in the cognitive activation level of their instruction.

2.2 ELTPC in Iran

Reviewing the related literature on TPC, it was found that although many educational studies have documented on the influential impacts of teachers' effectiveness on students' learning enhancement, there is no such report or study as English LTPC in Iran's education, particularly at high school level. Thus, there is no criterion based on which language teachers' competence can be evaluated, and it goes for a long time even for life-long career that no evaluation of the ELTPC is carried out. The situation is even worse when we figure out that there is no evaluation of the ELTPC at the time they are starting the career.

It is unfortunate to say that there is no professional association with authoritative power to decide about the situation of English language teaching in an EFL situation like Iran. The education is exclusively controlled and monitored by government through two official organizations, namely the Ministry of Education and the Ministry of Higher Education that are authorized to make decisions regarding standards and certification of teachers at school and university level, respectively. Neither of these educational organizations follows standardized criteria of the expected qualities of a qualified English language teacher starting the career and practicing it.

In the context of ELT in Iran, Shabani (2006) divided professional competencies of teachers into "characteristic and scientific." According to him, characteristic competencies refers to "student-oriented authoritarian, student oriented and intimacy oriented, subject oriented and intimacy oriented, subject oriented authoritarian" and scientific competencies refers to "awareness of psychology, teaching methods, new communication methods, social psychology, teaching psychology and communicating" (p. 1145).

Ilanlou and Zand (2011) studied the relationship between professional competencies of Iranian teachers and their perspectives about qualitative evaluation project. Findings showed that there is a significant relationship between teachers' professional competencies and their perspectives about qualitative evaluation. Employing questionnaire and interview, Aghajanzadeh Kiasi, Maftoon, and Birjandi (2017) investigated Iranian EFL high school teachers' perception of pedagogical competence. They found that teachers' generally enjoyed positive perceptions of pedagogical competence although there were some opposing views of pedagogical competence with regard to the teachers'' age and teaching experience.

Hosseinnia et al. (2019) developed a scale of EFL teachers' professional competencies at public and private sectors in Iran. They explored that professional competencies of teachers incorporate knowing and understanding students' needs and their learning process, subject matter knowledge, curriculum, the education framework and the educator's role. Professional competencies also include abilities such as subject application, classroom strategy, classroom administration, evaluation, and recording.

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In a similar vein, Shariatifar, Kiany, and Maftoon (2019) tried to find the components that create the content knowledge and pedagogical content knowledge of high school English teachers' through a review of the related literature and investigation of teachers and teacher educators' perspectives. They found three components, namely knowledge of the principles of language teaching methodology, knowledge of linguistics, and language proficiency for the factor of content knowledge and three other components of the curriculum, knowledge of developing, planning and managing language teaching, and knowledge of developing and evaluating instructional materials for the factor of knowledge of teaching.

2.3 The Construct of ELTPC in the Current Study

What follows is a brief introduction to the dimensions of ELTPC used in the present study followed by some experimental studies on the dimensions.

2.3.1 Preparation

Preparation concerns the skills involved in preparing teaching, which include identifying and organizing activities provided by the materials writer or even creating materials which are valid in terms of specific objectives (Thomas, 1987). Teaching needs preparation on the learning material, media, tools and technology, strategies in delivering these based on the structure of the knowledge and instructions that satisfy student's existing knowledge to guarantee smooth cognitive process (Retnowati, Murdiyani, & Mahmudi, 2018). Learning how to plan for instruction is still challenging teacher educators in their attempts to find effective ways of supporting prospective teachers (Rahimi, 2014). Lesson planning and preparation to improve teaching competencies have long been recognized by educational institutions as an integral part of teacher preparation world-wide (Boikhutso, 2010; Kizlik, 2008). According to Wilson, Floden, and Ferrini-Mundy (2001), studies that relate specific parts of teachers' preparation (subject matter, pedagogy, clinical experiences) affect teaching practices, and perhaps student achievement. The authors believe that studies that investigate teacher preparation could be useful to those designing and revising teacher education programs.

2.3.2 Subject Mastery

Subject mastery refers to the teachers' familiarization with the science and the dimensions of the related subject. It also refers to the knowledge of subjects the teacher is going to impart to students in a certain class (Zvarych, 2013). Akpan, Essien, and Obot (2008) asserted that one of the most important teacher variables that enhance their effectiveness is the mastery of the subject matter. For Mezieobi, Fubara, and Mezieobi (2008), any meaningful conception of teaching should recognize the nature of the subject and the good-objects to be taught and learned. Teachers should sufficiently familiarize themselves with the subject matter to be taught. Thus, owning a high competence of subject mastery, as Rena (2000) believes, helps teachers to teach the learners correctly, which in turn leads to the achievement of set objectives and enhances the consequent interest of the learners' to continue in the learning process. Adediwura and Tayo (2007) carried out a survey study on senior 1600 secondary students in schools in the South West zone of Nigeria in regard to their perception of the effect of teachers' subject mastery on learning. Using simple percentages, correlational analysis, and chi-square statistics, the researchers found that students' perception of teachers' knowledge of subject matter had a significant relationship on students' academic performance.

2.3.3 Management

Classroom management is universally seen as a key dimension of teachers' work as reflected in research that places it among the most required teaching skills (Huntly, 2008; McKenzie, Rowley, Weldon, & Murphy, 2011). According to Bennett and Smilanich (2012), it is the ability of a teacher to know not only what they want to teach, but also how they will organize and structure it for their students and their circumstances that makes all the difference, creating a healthy, caring classroom culture where all students and teachers can thrive.

Teachers' skill in classroom management is often cited as the dimension of teachers' work that is the most challenging and the area of training that many beginning and pre-service teachers feel is lacking (Kafman & Moss, 2010; Peters, 2012; Putman, 2009; Romano, 2008). As the central participants in classroom interactions, students and teachers naturally have strong views about what it takes to manage learning and surrounding behaviors effectively (Roache & Lewis 2011; Sullivan, Johnson, Owens, & Conway, 2014). For example, in the study conducted by Sullivan et al. (2014), 12 teachers in South Australia were asked to identify the range and frequency of student behaviors requiring disciplinary response and to explain how they responded. Analysis of responses to the web-based survey showed that

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low-level disruptive behaviors occurred most frequently with very little aggressive or antisocial behavior. The study showed that disengaged behaviors were the most prevalent suggesting that these "have more to do with factors within a teacher's control than with those located within the student" (p. 53). In a survey conducted with 50 secondary school teachers to capture their views on various disciplinary interventions and their classroom experiences in creating quality learning environments through questionnaire and follow up interviews, Egeberg, McConney, and Price (2020) reported that effective classroom managers build positive relationships with their students, manage their classrooms by establishing clear boundaries and high expectations, and engage students in their learning.

2.3.4 Teaching

Skills of teaching are demonstrated in the ability of teachers to teach in a way that actively supports students' learning. Moreover, many teachers are traditionally appreciated for their teaching skills by students, colleagues, and administration. It refers to teachers' classroom practices shaped by a wide range of interacting factors mediated by teaching to teach in a way that actively supports student learning (Thomas, 1987). As Witcher (cited in Ghavidel & Valipour, 2020) argues, instructional or teaching competence includes the teacher's ability to create student-centered classrooms, provides sufficient content knowledge, and maintains a pedagogical demeanor. Teachers' understanding that instruction should be tailored to meet each learner's needs plays a paramount role in this regard. Jay and O'Conner (2005) note that teachers' teaching practices are shaped by a wide range of interacting factors that actively supports student learning and are referred to as the teaching skills.

2.3.5 Assessment

According to Webber and Tschepikow (2012), assessment of students' learning outcomes is a significant component of effective teaching and learning in any educational institutions. Zare Toofan, Vaseghi, and Zare (2019) stated that assessment is a key term in English language teaching research and plays an important role in the success of language learning programs pursued by many EFL teachers. Van den Akker (2003) described assessment as essential component of the curriculum practice. According to him, assessment is a process for obtaining information about curriculum operation in order to make decisions about student learning, curriculum and programs and on education policy matters. Carless, Joughin, and Mok (2006) perceived assessment as a mechanism to inform students about their learning performance and how they can improve on their learning outcomes. Boud and Falchikov (2006) also pointed out that assessment can have powerful effects on what students do and how they do it, communicates to them what they can and cannot succeed in doing and builds or undermines their confidence as learners. Brown (2009) in New Zealand in a survey on primary school teachers' perceptions of alternative assessment, found that teachers accepted that the assessment improved teaching and learning and made schools accountable. Metin (2011) also studied and analyzed the attitudes of EFL primary school teachers in an alternative assessment of seven variables including age, nationality, degree, major, teaching experience, in-service training, and educational zone over a period of time. Metin found that teachers' attitudes toward alternative assessment should be the focus of ongoing research, and teachers' attitudes reflect their beliefs, and these beliefs are the result of experience.

2.3.6 Belief

It is firmly believed that teachers' beliefs are innate in people's concepts, similar to personal capacity or knowledge and that such beliefs may develop alongside the application of teaching practices (Lan & Lam, 2020). Beliefs are statements teachers make about their ideas, thought, and knowledge that are expressed as evaluations of what should be done and is preferable (Borg, 2015). Barcelos and Kalaja (2011) define beliefs as mental constructs that are emergent and dynamic assumptions about students, classrooms, and the academic teaching materials. What is more, teachers' belief of what learning and teaching process is and how teachers view this process (Kalaja, 2011) highly affect their practice and their treatment of action in the classroom. Knowing teachers' beliefs is also knowing teachers' classroom practices since teachers' actions are highly affected by beliefs about language teaching and learning (Brown, 2009). However, previous literature indicated that teachers' beliefs, especially in the area of classroom technology integration, often did not associate to their teaching practices (Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012).

2.3.7 Attitude

Attitude means differently in different settings; most of the conducted researches show that it is connected to beliefs. Attitudes and behaviors are linked; moreover, attitudes are essentially divided into likes and dislikes (Siragusa & Dixon, 2008). "A positive or negative emotional relationship with or predisposition toward an object, institution or

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person" is Le Roux's (as cited in Ghafoori & Aharlooie, 2020) definition of attitude. According to Apelgren and Giertz (2010), attitude is intended to mean how the teachers see respectively their own role and responsibility and the role and responsibility of their students. It is about having a fundamental pedagogical outlook and putting it into practice. According to Eshreteh and Hisham Sia,j (2017), attitudes are the way a person thinks or behaves, a complex state of mind involving feelings, values, and tendencies to act in certain ways. Oskamp (1991) argues that the concept of attitude is probably the most distinctive and indispensable concept in social psychology positing that, as Parasuram (2006) notes, attitudes guide and influence people's behaviors in their daily lives.

3. Methodology

3.1 Design of the Study

The method the present research proposed was a questionnaire-based quantitative approach that made use of quantitative interpretations of the findings obtained through Exploratory Factor Analysis (EFA) based on qualitative research method, using a researcher-developed questionnaire.

3.2 Participants

The questionnaire was distributed among 360 teachers practicing teaching English chosen randomly out of 415 high school English language teachers in Guilan Province, Northern Iran. Out of these participants, 320 responded to the questionnaire correctly. The participants were of both genders (male, 46.2%, and female, 53.7%) with different years of teaching experience of 1-5 (13.4%), 6-10 (17.1%), 11-15 (18.4%), 16-20 (23.7%), 21-25 (16.8%), and over 26 (10.3%) with their age ranging from 25-30 (20%), 31-35(12.1%), 36-40 (10.9%), 41-45 (34%), and over 46 (22.8%), and with different university degrees of BA (29%), MA candidates (22.5%), MA (36.2%), PhD candidates (6.5%), and PhD holders (5.6%) in the fields of teaching (59.6%), linguistics (11.2%), literature (25.45%), and translation (3.8%).

3.3 Instrument and Materials

Since the research attempted to recognize and develop the components of PC among high school English language teachers, a researcher-developed questionnaire of a five-point Likert scale ranging (strongly agree), 2 (agree), 3 (neutral) 4 (disagree), or 5 (strongly disagree) was used. The research was conducted through probability sampling method (Stage cluster sampling). The sample was taken from the province of Guilan divided into four clusters: Northern, Southern, Eastern, and central. From each cluster, 3 to 5 districts (towns) were selected as a stratified sample of the study and were spread geographically.

3.4 Data Collection Procedure

The researcher administered an evaluation of face and content validity of the questionnaire by soliciting the appraisals on the instrument from six experts who were TEFL teachers, researchers, and teacher educators. The type of question, language used, and wording, and the order of items that might bias the participants' response to the questionnaire items were considered in order to check the questionnaire based on the criteria of relevance, clarity, simplicity, and ambiguity. Reportedly, all experts strongly supported the face and content validity of the questionnaire and qualified it as having very good variables supporting the constructs.

Next, to ensure the internal consistency of the questionnaire and to demonstrate it by piloting, it was administered to a sample representative number of teacher participants (65 high school English language teachers) and the estimated Cronbach's alpha coefficient was 0.83 indicating that the questionnaire enjoyed an appropriate level of reliability. The iterative revision of the questionnaire based on the experts' opinion and piloting produced a 60-item questionnaire out of the 87 initial variables.

Factor analysis, as one statistical technique that is used to determine the constructs or domains within the developing measure was implemented to achieve the validity of the constructs of the questionnaire which included the evaluation of the psychometric quality of the dimensions for the assessment of the dimensionality of the variables, and the selection of items to be included in the questionnaire for data reducing purpose. The 60-item instrument was administered to 365 high school English teachers, but only 320 teachers completely responded. Forty five questionnaires were considered invalid since 23 of them were not completely filled, 16 were filled carelessly not following the coding, and six questionnaires were returned without the demographic information being filled. On the whole, out of the 365 questionnaires distributed, over 87% of them were returned completed.

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As mentioned above, EFA was employed to determine and to define the indicators of the constructs or domains of the questionnaire. Therefore, the data gathered from 320 respondents were analyzed and measured through EFA as it is based on the common factor model, and a factor loading for a variable is a measure of how much the variable contributes to the factor (Bryman & Cramer, 2005; Pallant, 2013). The present study employed EFA to explore the possible underlying structure of interrelated variables (Child, 2006) of ELTPC, to determine the number of common factors influencing it and to establish the strength of the relationship between each factor and each observed measure (Cokluk & Kayri, 2011). Also, EFA is mostly used as a research technique for making a theory or model. As such, it helped the researcher examine if any variables would be excluded for the final constructs and define the construct based on the theoretical framework, which identified the direction of the measure (Parsian & Dunning, 2009). The seven intended constructs based on the developed questionnaire included preparation, management, teaching, subject mastery, assessment, attitude, and belief with 9, 8, 9, 9, 8, 9, 8, 9, and 8 variables, respectively.

3.5 Data Analysis

The first step in EFA analysis was to find the correlation matrix among the variables in the construct. Principal Components Analysis (PCA), as the extraction technique, requires that there be some correlations greater than 0.30 between the variables included in the analysis. For preparation, management, teaching, subject mastery, assessment, attitude, and belief sets of variables, there were over 10, 7, 9, 5, 8, 10, and 8 correlations, respectively, in the matrix greater than 0.30, satisfying the requirement. The communality as the variance in the observed variables accounted for by a common factor or common variance, equal to the square of the factor loadings (Child, 2006) was measured for all variables. As a rule of thumb, the higher the communalities extracted, the better the variables are displayed. Therefore, the small extracted communalities (smaller than 0.5) were preferably removed.

The total variance determining the number of significant factors by reporting the variance explained by each component as well as the cumulative variance explained by all components was gained through PCA extraction method, and the factors having eigenvalues over 1 were interpreted. The scree plot that is a graph of the eigenvalues against all the factors and is useful for determining the number of factors to retain was used to reveal a clear break after each component gained. In the component matrix of unrotated factors, all loadings less than 0.5 were suppressed for easier reading. As the interpretation of factor loadings was not possible without rotation, the factors were rotated through varimax rotation in PCA so that the interpretability of loadings could be increased. It needs to be mentioned that the researcher used the Component Transformation Matrix (CTM) for all constructs to determine that the chosen rotation technique was sufficient for the data by displaying the correlations among the components prior to and after rotation. In the meantime, the reproduced correlation matrix that is the correlation matrix based on the extracted factors was gained for all constructs to represent the differences between original correlations and the reproduced correlations. However, to save time and space the communalities of observed variables, the total variance explained, and the rotated component matrix with final loadings of the factors are only presented.

3.5.1 Sampling Size and Adequacy

It is essential to have a sufficiently large sample to enable EFA to be undertaken reliably (Bryman & Cramer 2005) since a larger sample size will diminish the error in the data, and the factors obtained tend to be more generalizable than those obtained from a small sample. Some authors (e.g., Comrey & Lee, 1992) recommend that the ratio of participants to items be considered suggesting between 5-10 participants per variable. As a 60-item questionnaire (60 variables) was administered to 320 participants, the analysis was 60/320= 5.3 respondents for each variable, which conformed to the above-mentioned criterion. Nevertheless, to ensure that an appropriate sample size was obtained for the current research for FA, Kaiser-Meyer-Olkin (KMO) sampling adequacy and the Bartlett's test of sphericity were calculated.

Based on KMO sampling adequacy, a measure over 0.5 is barely acceptable, and values between .8 and .9 are great and values above .9 are superb (Kaiser, cited in Pallant, 2013). In the present research questionnaire, the KMO sampling adequacy test statistic for all 60 variables was 0.838, which was large enough for further analysis and higher than the threshold value of 0.5 as shown in Table 1.

Table1. KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.838
Bartlett's Test of Sphericity	Approx. Chi-Square	4134.770
	df	1120
	Sig.	.000

Before moving on to the next stage of analysis, it was also necessary to make sure that the Bartlett's test of sphericity had a significance level above 0.05 indicating the strength of the relationship among variables. As seen in Table 1, the Barlett's test of spherincity statistic is 4134.770 implying that the included variables have satisfactory characteristics in order to conduct an FA.

4. Results

4.1 Factor Extraction

From the initial and extraction communality for 'preparation construct' of the ELTPC instrument, nearly 90% of the variance accounted for *using lesson plans for effective language teaching* while over 50% (the least) of the variance accounted for *providing students with activities relevant to the English lesson*. It was observed that the variable '*encouraging shy students to participate in carrying out language activities'* accounted for nearly 77% while '*maintaining discipline and order in classes'* accounted for nearly 60% that is the least in the management construct. The extraction communalities for 'teaching construct' indicated that the variable '*using different teaching tools in my English language classes'* accounted for nearly 90% while '*using various instructional techniques'* accounted for 52% that was the least in this construct. The extraction communalities for 'assessment construct' indicated nearly 70% of the variance accounted for '*implementing continual measurements during the course'* while only slightly over 20% of the variance accounted for *'using various methods (e.g., students' opinions, parents' opinions, and students' final scores) to evaluate my students.'* Thus, variable 7 was advisably deleted, and the others were preserved for further FA. Regarding the construct of 'subject mastery', it was indicated that %86 of the variance accounted for '*seeking information for content knowledge via reading journal articles, book chapters, attending conferences'* while over 60% (the least) of the variance accounted for '*having a good knowledge of subject matter.'* In the 'construct of attitude', the variable '*being interested in students' learning achievement'* accounted for nearly 80% while '*encouraging students to raise questions in my language classes'* accounted for 34% that is the least in this construct, which was advisably excluded from further FA.

Finally, for 'belief construct', it was indicated that, 84% of the variance accounted for '*believing learning English is learning grammar rules'* while over 25% (the least) of the variance accounted for '*believing being able to translate is an important goal of learning English.'* Therefore, this variable and variable two were advisably excluded since they had the extraction of 0.25 and 0.35, respectively, which were smaller than 0.5.

Table 2 reports the variance explained by each component, as well as the cumulative variance explained by all components. The factors are arranged in the descending order based on the most explained variance. The *Extraction Sums of Squared Loadings* is identical to the *Initial Eigenvalues* except the factors with eigenvalues less than 1 that are not shown and interpreted. Here, we see the number of significant factors determined.

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Table 2. Total variance explained by all components

Components	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Var.	Cumul. %	Total	% of Var.	Cumul. %	Total	% of Var.	Cumul.%
1	5.401	8.940	8.940	5.401	8.940	8.940	5.212	8.493	8.493
2	5.214	8.658	14.682	5.214	8.658	14.682	5.102	8.382	16.256
3	5.070	8.451	20.710	5.070	8.451	20.710	4.704	8.331	21.542
4	4.932	8.102	25.625	4.932	8.102	25.625	4.501	8.025	26.745
5	4.782	7.136	30.192	4.782	7.136	30.192	4.485	7.048	31.562
6	4.428	6.120	34.597	4.428	6.120	34.597	4.321	6.850	33.896
7	4.001	6.012	38.355	4.001	6.012	38.355	4.130	6.625	37.563
8	3.937	5.810	41.929	3.937	5.810	41.929	3.854	6.429	40.632
9	3.801	5.210	45.249	3.801	5.210	45.249	3.625	5.854	44.852
10	3.739	5.231	48.347	3.739	5.231	48.347	3.429	5.602	47.257
11	3.617	5.028	51.270	3.617	5.028	51.270	3.165	5.123	50.326
12	2.949	4.915	54.107	2.949	4.915	54.107	2.804	4.819	53.158
13	2.740	4.567	56.746	2.740	4.567	56.746	2.623	4.489	55.546
14	2.643	4.405	59.201	2.643	4.405	59.201	2.512	4.201	58.549
15	2.255	3.758	61.584	2.255	3.758	61.584	2.327	3.520	60.847
16	2.145	3.574	63.929	2.145	3.574	63.929	2.190	3.251	63.389
17	1.772	3.320	66.125	1.772	3.320	66.125	1.875	3129	65.896
18	1.531	3.098	68.199	1.531	3.098	68.199	1.845	3.012	67.589
19	1.358	2.924	70.113	1.358	2.924	70.113	1.687	2.859	69.893
20	1.164	2.837	71.896	1.164	2.837	71.896	1.642	2.801	71.369
21	1.070	2.639	73.588	1.070	2.639	73.588	1.621	2.732	72.525

Extraction Method: Principal Component Analysis.

As seen, for the ELTPC instrument, 21 variables had an eigenvalues more than 1 and were kept for analysis. Looking at the last two columns, we witness that component 21 explained % 2.732 of the variance in the items, and the 21 extracted components could account for %72.525 of the factors variance changeability. In other words, nearly % 72.5 of the variance in the items was explained by the 21 extracted components in the constructs of preparation, management, teaching, assessment, subject mastery, attitude, and belief.

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An inspection of the scree plot of all constructs revealed a clear break after each component gained. Based on Catell's (as cited in Pallant, 2013) scree diagram, the results of PCA showed an equal number of components with eigenvalues exceeding the corresponding criterion value over 1. Therefore, it was decided to retain 21 components were kept for further investigation in accordance with the eigenvalues for the constructs (Figure 4).

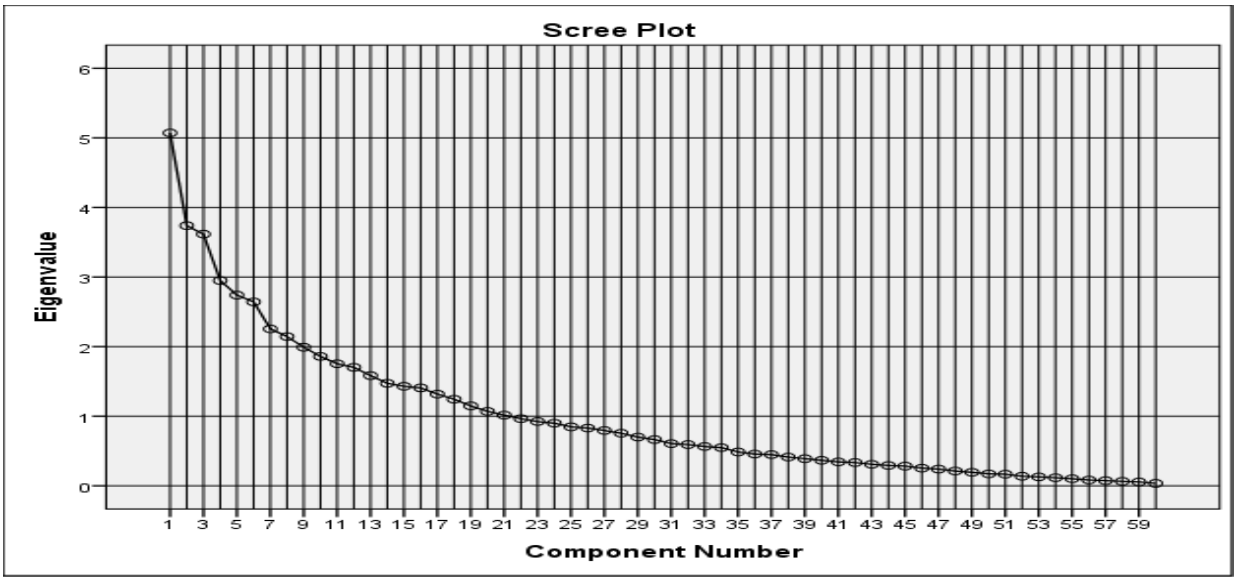

Figure 4. The scree plot of the components extracted in ELTPC instrument

4.2 Factor Loadings

The component matrix of unrotated factors that comprised the factor loadings of each variables in the remaining components was investigated. It showed the loadings of the variables on the components extracted. The higher the absolute value of the loading, the more the factor contributes to the variable. However, the interpretation of factor loadings was not possible without rotation. Thus, the factors were rotated so that the interpretability of loadings could be increased. What follows is the rotated component matrix by using Principal Component Analysis with varimax rotation. It is worth mentioning that the component matrix of rotated factors comprised the factor loadings of each variables in three components for the constructs of preparation, management, subject mastery, teaching, assessment, attitude, and belief all of which are explained below. The gaps on the tables represent loadings that are less than 0.5. The researcher suppressed all loadings less than 0.5. This makes reading the table easier.

Preparation. It appears that the variables intended to form the preparation construct load to the first component with approximately similar factor loadings (.936 and .917 for variables 1 and 26). Moreover, the second component showed high loadings for the 12, 47, and 49 variables with .635, .616, and .642 loadings. Also, on the third component, variables 3, 4, and 9 measured the preparation construct although variable 3 loaded (.906) substantially the highest (Table 3).

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Table 3. Rotated Component Matrix[a] for preparation construct

	Components		
	1	2	3
P1. I use lesson plans for effective language teaching.	.936		
P2. I plan for students' independent study to bring variations to teaching English.		.635	
P3. I inform students of the performance objectives they will be expected to achieve.	.917		
P4. I prepare instructional materials for all sections of an English lesson.			.785
P5. I provide students with activities relevant to the English lesson.		.616	
P6. I prepare necessary English language materials for students.		.601	
P7. I am familiar with the appropriate use of English teaching materials.			.906
P8. I prepare PowerPoint presentations for instructional materials.			
P9. I prepare audio-visual (CDs, DVDs …) materials for teaching purposes.			.588

a. Rotation converged in 8 iterations.

Most importantly, variable 8 did not load on any components, and it needed to be removed leaving only eight variables to measure the preparation construct. Consequently, based on the EFA of the preparation construct, 8 variables created the construct out of the initially 9 intended variables.

Management. The variables intended to form the management construct loaded to the first component with approximately similar loadings of 0.820 and 0.785 for variables 5 and 7, respectively. Moreover, the second component showed high loadings of .608, .852, and .846 for variables 3, 6, and 8. On the third component, variables 1, 4, and 6 measured the management construct with .742, .542, and .546 loadings (Table 4).

Table 4. Rotated Component Matrix[a] for management construct

	Components		
	1	2	3
M1. I maintain discipline and order in my classes.			.724
M2. I value diverse levels of English knowledge to develop students' confidence.			
M3. I set clear expectations that hold students accountable for learning.		.608	
M4. I have a sense of humor in my English language classes.			.524
M5. I encourage shy students to participate in carrying out language activities.	.820		
M6. I pay attention to all students.		.852	.546
M7. I maintain a competitive atmosphere in my classes.	.785		
M8. I allow students' participation in my English language classes.		.846	

a. Rotation converged in 9 iterations.

However, variable 2 did not load on any components, and it was removed leaving only seven variables to measure the management construct, and seven variables created the construct out of most of the initially intended variables, yet the amount of variance accounted for the variables was improved by principal component.

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Teaching. It can be clearly seen that the variables intended to form the teaching construct loaded on three components. Variable 1 loaded on components 2 and 3 with approximately similar factor loadings of 0.545, 0.596, respectively. The variables 2, 3, 4, and 5 loaded only on one component of 1, 1, 3, and 2 with 0.669, 0.721, 0.879, and 0.597, respectively. The 7th variable loaded on components of 1 and 2 with 0.595 and 0. 631 loadings. The 8th variable loaded on only 3rd component that was substantially the biggest loading (0.940) among others in teaching construct. The variable 9 loaded on the 1st and 3rd components with different loadings of 0.510 and 0.870 (Table 5).

Table 5. Rotated Component Matrix[a] for teaching construct

	Components		
	1	2	3
T1. I teach students based on their language proficiency levels.		.545	.596
T2. I use various instructional techniques.	.669		
T3. I review the lesson before the end of class.	.721		
T4. I follow the principles of teaching English (e.g., concrete to abstract, simple to complex, known to unknown, etc.).			.879
T5. I simplify complex language concepts/ points for my students.	.461	.597	
T6. I use different techniques of English language teaching in my different classes of students.			
T7. I provide students with feedback.	.595	.631	
T8. I use different teaching tools in my English language classes.			.940
T9. I adopt appropriate teaching methods.	.510		.870

a. Rotation converged in 7 iterations.

However, variable 6 did not load on any of these four components, and eight variables created the construct out of the 9 initially intended variables.

Assessment. It can be clearly seen that the variables intended to form the assessment construct loaded on the third component with approximately similar factor loadings of 0.704 and 0.756 for variables 1 and 6, respectively. Moreover, the second component showed high loadings for the variables 2 and 5 supposed to measure the construct with 0.750 and 0.616 loadings. On the first component, variables 3, 4, and 8 measured assessment construct with 0.523, 0.696, and 0.706 loadings, respectively (Table 6).

Table 6. Rotated Component Matrix[a] for assessment construct

	Component		
	1	2	3
As1. I communicate with parents to improve students' language learning.			.704
As2. I implement continual measurements during the course.		.750	
As3.I use students' exam scores to improve my teaching.	.523		
As4.I test only the materials covered in class.	.696		
As5.I keep records of the students' language performance to track their rate of learning.		.616	

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As6. I assess language proficiency levels of students based on their learning performance in class.	.756
As7. I use various methods (e.g., students' opinions, parents' opinions, and students' final scores) to evaluate my students.	
As8. I analyze the results of my various assessments to improve language Instruction.	.706

a. Rotation converged in 4 iterations.

As shown in Table above, variable 7 did not load on any component, as its communality was very low with 0.219. Consequently, 7 variables created the construct out of most of the initially intended variables.

Subject mastery. Based on the results of principal component with varimax rotation, it can be obviously observed that the variables intended to form the subject mastery construct loaded on the third component showed very high loadings only for variables 6, 7, and 9 with 0.922, 0.609, and 0.869. In addition, on the third component, variables 4 and 5 measured the subject mastery construct with 0.793, and 0.684 loadings, respectively. The second component also showed loading for two variables of 2 and 3 with approximately similar 0.707 and 0.788 loadings. Finally, the first component showed a different loading for variables 1 and 8 with 0.820 and 0.663 loadings (Table 7).

Table 7. Rotated Component Matrixa for subject mastery construct

	Component		
	1	2	3
SM1. I understand the need to update my teaching knowledge.	.820		
SM2. I use English material resources that facilitate learning.		.707	
SM3. I exchange my teaching experiences with my colleagues.		.788	
SM4. I attend workshops to improve my general language proficiency.			.793
SM5. I update my English language teaching skills by attending in-service courses.			.684
SM6. I seek information for content knowledge via reading journal articles, book chapters, and attending conferences.			.922
SM7. I am familiar with different English language activities.			.609
SM8. I have a good knowledge of subject matter.	.663		
SM9. I use different sources (books, the internet, newspapers …) to provide students with the needed materials.			.869

Note: Rotation was converged in 7 iterations.

Consequently, based on the EFA of the construct of subject mastery, no variable was excluded; all 8 variables created the construct, and the amount of variance accounted for the variables was improved by principal components.

Attitude. The factor loadings of each variable in the remaining 3 components after rotations showed that the variables intended to form the attitude construct loaded on the third component with approximately high factor loading (0.835) but only on one variable 8. However, the third component showed high loadings for the variables 1, 5, and 9 with approximately similar loadings of 0.634, 0.595, and 0.591, respectively. The second component loaded on the variables 2 and 3 to measure the attitude construct with almost the same loadings of 0.737 and 0.735, respectively. The first component, also, loaded on the 4th and 6th variables with similar loadings of 0.793 and 0.715 (Table 8).

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Table 8. Rotated Component Matrixa for attitude construct

	Component		
	1	2	3
At1. I motivate students to learn English.			.634
At2. I respect the English language teaching profession.		-.737	
At3. I recognize the importance of English in today's world.		.735	
At4. I am interested to continue my career as an English language teacher.	.793		
At5. I encourage students to raise questions in my language classes.			.595
At6. I encourage teamwork to improve learning.	.715		
At7. I make my classes interesting for the students.			
At8. I am interested in students' learning achievement.			.835
At9. I take a reflective stance toward English language teaching.			.591

a. Rotation converged in 7 iterations.

In accordance with the communalities, variable 51 did not load on any component, as its communality was very low with 0.340 extraction that resulted in its removal from the nine variables leaving only 8 variable to measure the attitude construct. Consequently, based on the EFA of the construct, it can be claimed that with variable 7 excluded, 8 variables created the construct out of the initially intended variables, yet the amount of variance accounted for the variables was improved by principal components.

Belief. The factor loadings of each variable in the 3 components after rotation revealed that the variable intended on build the belief construct loaded to the third component with different factor loadings for items 1 and 6 with 0.803 and 0.553. The second component loaded on the variables 3 and 8 with almost the same loadings of 0.714 and 0.739, respectively. The first component loaded on the 4th and 7rd variables with high loadings of 0.858 and 0.917. In accordance with the communalities, variables 2 and 5 did not load on any component, and their communalities were very low with .351 and .251 extractions that resulted in their removal from the questionnaire leaving only 6 variables to measure the belief construct (Table 9).

Table 9. Rotated Component Matrixa for belief construct

	Component		
	1	2	3
B1. I believe native-like pronunciation is important in speaking English.			.803
B2. I believe being able to communicate is the goal of learning English.			
B3. I believe learning grammar and vocabulary is the only way to learn English.		.714	
B4. I believe learning English is learning vocabulary.	.858		
B5. I believe being able to translate is an important goal of learning English.			
B6. I believe going to a private English language institute is an important way to learn the English language.			.553
B7. I believe learning English is learning grammar rules.	.917		

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B8. I believe passing university entrance exam is the goal of learning English in our high schools.	.739

a. Rotation converged in 5 iterations.

Consequently, based on the FA, it can be claimed that with variables 2 and 5 excluded, 6 variables created the construct out of the initially intended variables, yet the amount of variance accounted for the items was improved by principal components. It needs to mention that, the researcher used the Component Transformation Matrix (CTM) for all constructs to determine that the chosen rotation technique was sufficient for the data by displaying the correlations among the components prior to and after rotation. In the meantime, the reproduced correlation matrix that is the correlation matrix based on the extracted factors was gained for all constructs to represent the differences between original correlations and the reproduced correlations. Furthermore, the reliability of the developed questionnaire was estimated through the Cronbach's coefficient Alpha. As declared by Pallant (2013), an alpha coefficient of .70 is an accepted criteria due to its ability to generate a standard error of measurement of .55, the results of Cronbach Coefficient showed that all the variables of the constructs enjoyed an accepted alpha coefficient of over .80, and the total alpha was found to be .81 (see Table 10).

Table 10. Cronbach Coefficient Alpha for each factor

Factors	Items	Alpha
Preparation	Q1, Q12, Q26, Q38, Q47, Q49,Q 55, Q58	.823
Management	Q2, Q2, Q7, Q21, Q32, Q43, Q44, Q54	.824
Teaching	Q9, Q14, Q15, Q16, Q18, Q28, Q34, Q37	.812
Assessment	Q17, Q22, Q24, Q27, Q29, Q30, Q52	.828
Subject mastery	Q8, Q10, Q11, Q20, Q33, Q36, Q39, Q40, Q41	.801
Attitude	Q6, Q23, Q31, Q45, Q48, Q50, Q59, Q60	.816
Belief	Q4, Q13, Q21, Q25, Q35, Q46, Q53, Q57	.834
Total items	53	Total alpha .819

Based on the results gained from the analysis of factors in the constructs of the present developed questionnaire of ELTPC via EFA, it was found that the total number of variables supporting the seven constructs of the questionnaire reduced to be 53 from the initial 60 variables. In the end, the seven constructs, the initial items of each factor, and the extracted items, and the excluded items on their corresponding factor are summarized in Table 11.

Table 11. Summary of factors analyzed and interpreted

Factor (construct)	Initial variables		Excluded variable(s)
Preparation	1, 12, 26, 38, 47, 49, 55, 56, 58	1, 12, 26, 38, 47, 49, 55, 58	56, *I prepare PowerPoint presentations for instructional materials.*
Management	2, 3, 5, 7, 32, 43, 44, 54	2, 5, 7, 32, 43, 44, 54	3, *I value diverse levels of English knowledge to develop students' confidence.*

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Teaching	9, 14, 15, 16, 19, 18, 28, 34, 37	9, 14, 15, 16, 18, 28, 34, 37	19, *I use different techniques of English language teaching in my different classes of students.*
Assessment	17, 22, 24, 27, 29, 30, 42, 52	17, 22, 24, 27, 29, 30, 52	42, *I use various methods (e.g., students' opinions, parents' opinions, and students' final scores) to evaluate my students.*
Subject mastery	8, 10, 11, 20, 33, 36, 39, 40, 41	8, 10, 11, 20, 33, 36, 39, 40, 41	No variable excluded
Attitude	6, 23, 31, 45, 48, 50, 51, 59, 60	6, 23, 31, 45, 48, 50, 59, 60	51, *I make my classes interesting for the students.*
Belief	4, 13, 21, 25, 35, 46, 53, 57	4, 13, 21, 25, 35, 46, 53, 57	13, *I believe being able to communicate is the goal of learning English.* 35, *I believe being able to translate is an important goal of learning English.*

Having developed the questionnaire of PC, the researcher tried to estimate the relationship between and among the constructs. However, since the researcher claims ELTPC is a multidimensional construct (which is in line with current state of research), an inter-correlational analysis among the factors as an examination of the multidimensional structure of the instrument was presented in Table 12.

Table 12. Correlations among the constructs of the ELTPC instrument

		Prep.	Man.	Tea.	Ass.	Subj.mast.	Atti.	Bel.
Prep.	Pearson Correlation	1	.825**	.878**	.924**	.958**	.812**	.798**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.001
	N	320	320	320	320	320	320	320
Man.	Pearson Correlation	.825**	1	.914**	.823**	.931**	.810**	.786*
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.022
	N	320	320	320	320	320	320	320
Tea.	Pearson Correlation	.878**	.914**	1	.865**	.928**	.842**	.816**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	320	320	320	320	320	320	320
Ass.	Pearson Correlation	.924**	.823**	.865**	1	.917**	.789**	.856**
	Sig. (2-tailed)	.000	.000	.000		.000	.003	.000
	N	320	320	320	320	320	320	320
Sub.mast.	Pearson Correlation	.958**	.931**	.928**	.917**	1	.849**	.798**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.005
	N	320	320	320	320	320	320	320
Atti.	Pearson Correlation	.812**	.810**	.842**	.789**	.849**	1	.815**

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	Sig. (2-tailed)	.000	.000	.000	.003	.000		.003
	N	320	320	320	320	320	320	320
Bel.	Pearson Correlation	.798**	.786*	.816**	.856**	.798**	.815**	1
	Sig. (2-tailed)	.001	.022	.000	.000	.005	.003	
	N	320	320	320	320	320	320	320

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The inter-correlational analysis within constructs shows how the variables within the groups of variables are measuring the same trait. These constructs have been previously classified into groups. As the correlations are approximately high among the constructs based on the results achieved, it is assumed that the variables within the group of variables are measuring the same underlying trait of ELTPC.

4.3. Developed Research Model of ELTPC

Since the success of an education system depends mainly on the qualifications of teachers who are, in particular, the basic practitioners of this system, teachers are the basic elements of an education system (Erdem & Koc, 2016). To be effective in the field, an English language teacher needs to be armed with the required PC the structure of which can be divided into methodological, professional, and individual competence. However, what it pertains to the current research is the PC components, including knowledge, skills, attitudes, beliefs, management, etc. that can be examined in some combinations.

In the PC model developed according to the findings of current research, the seven components that contribute to student learning include methodological and professional components (e.g., preparation, subject mastery, teaching, assessment, and management) individual components (e.g., belief and attitude) that are nonexistent in the previous models. The researcher believes that student learning per se that is the outcome of the components of ELTPC will finally lead to PC of teachers. In other words, student learning achievements after a certain course of study promotes ELTPC. It means that there is a positively direct relationship between PC and student learning since it can act as a driving force for teachers to improve their in-class performance that end in the students' learning achievements (see Figure 5).

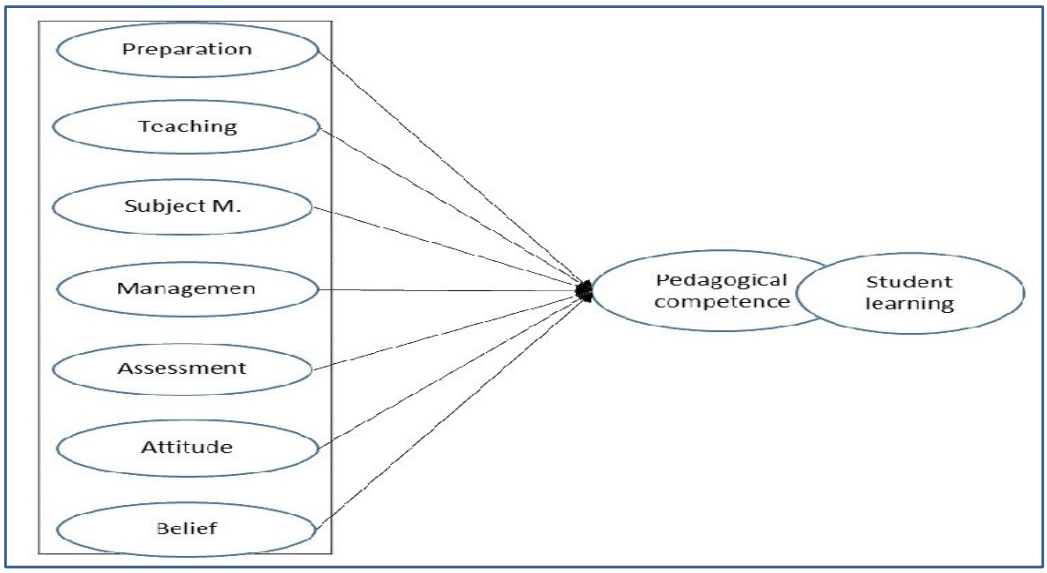

Figure 5. The model of ELTPC developed in the current study

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To grant legitimacy to a system ELTPC, language teachers' approach should be interchangeably based on a positive attitude supported by strong belief toward course preparation, teaching, learning, subject knowledge, classroom communication and interaction, and critical feedback that should contribute to knowledge building in their field of pedagogy for high school English language teaching that results in student learning achievement.

Teachers' teaching skills, which is a central part of ELTPC, is demonstrated in the ability to teach in a way that actively supports student learning. The knowledge of teaching the subject or the subject area is of crucial importance. On the other hand, classroom management proves to be an important factor in channelizing the way the classroom environment is controlled and managed for optimal student learning. In order for teachers' optimal preparation for course, practical teaching skills, and satisfactory subject mastery to take effect effectively, classroom management is highly required by teacher. In the same vein, it is assessment that reflects all teachers' demanding job of preparation for teaching the subjects in a manageably organized classroom in order to make sure if what has been done in a course is of a satisfactory outcome, student learning during and at the end of a course. In this way, teachers reflect upon the preparatory work, their teaching skills and strategies, and their control and behavior in classroom through analyzing the methods employed and the teaching done. Accordingly, the development of ELTPC should be geared to aimed and continuous activities developed and designed in order to update, develop, and increase teachers' knowledge, skills, and attitudes in managerial, personal, educational, and subject field of teachers so that improvement in student learning can be fulfilled (Erdem & Koc, 2016).

5. Discussion

By comparing the results of this study with the literature reviewed, it could be observed that the seven dimensions of PC identified in this study are similar to dimensions identified by other studies The findings also correspond to the related literature, which clearly indicates that TPC is multidimensional. What follows a discussion of the findings of the current study according to the components of ELTPC? As found in the current study, preparation is needed for teaching and learning materials based on the structure of the knowledge and instructions (Retnowati, Murdiyani, & Mahmudi, 2018). Traditionally, it has been argued that preparation for teaching requires identifying and organizing activities that direct the practice of teaching in an organized path, and that planning for teaching as a meta-cognitive strategy of teaching process is an imperative and essential detachment of the overlapping activity of teaching. The findings in the present study are in line with studies (e.g., Boikhutso, 2010; Rahimi, 2014) which certify that lesson planning and preparation have long been recognized by educational institutions as an integral part of teacher preparation world-wide to improve teaching. Moreover, in harmony with the study carried out by Wilson, Floden, and Ferrini-Mundy (2001), it was found that teachers' preparation with regard to subject matter, pedagogy, teaching experiences are considered as highly important components of TPC. It was also certified by Shariatifar, Kiany, and Maftoon (2019) that planning and managing language teaching, and knowledge of developing and evaluating instructional materials are among the important components of TPC.

In the present study, the component of teaching accords to what Jay and O'Conner (2005) address teachers' classroom practices as shaped by a wide range of interacting factors mediated by teaching to teach in a way that actively supports student learning. The finding regarding this component is also confirmed by studies (e.g., Borg & Albery, 2015; Darling-Hammond, 2013; Restubog, 2009; Sanchez, 2007) which emphasize that teaching methodology is a useful element in an education process which enhances the teaching-learning process and teachers' concerns are mostly related to the quality of their explanations and instructions. Having the knowledge of the principles of language teaching along with the knowledge of linguistics and language proficiency (Shariatifar, Kiany, & Maftoon, 2019) was an important component of TPC. The finding in this regard is in line with studies (e.g., Coombe, Al-Mamly, & Troudi, 2009; Fulcher, 2012; Inbar-Lourie, 2013; Malone, 2008; Yin, 2010) that show it is important for language teachers to know how to create their assess and monitor learners' progress and achievement in the language classroom, and language teachers with a solid background in assessment are well equipped to integrate assessment with instruction and use appropriate forms of teaching leading to enhanced learning. The findings indicate that the assessment improved teaching and learning and made schools accountable (Brown, 2009).

Regarding the subject mastery of English teachers, the finding of current study is consistent with previous findings of other scholars (e.g., Apelgren & Giertz, 2010; Fordham, 2012; Lacang, 2007; Magno & Sembrano, 2008; Shulman, 1986) who claim that having a subject mastery is crucial, and deep subject knowledge and pedagogical content knowledge are both needed. They also confirm that teachers must know and understand the subjects they teach, including knowledge of central facts, concepts, and theories. The finding is also supported by the study done by

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Adediwura and Tayo (2007) in which the authors reported that students' perception of teachers' knowledge of subject matter had a significant effect on students' academic performance. The implication of this for teachers is that they must not only be conversant with the content themselves but must also be competent in the use of such knowledge during their teaching process if they are to be effective enough to promote learning. It was also confirmed by Hosseinnia et al. (2019) that teachers' professional competencies incorporate subject matter knowledge and subject application.

The finding accords with several studies (Moore, 2009; Roesler, 2009; Sanchez, 2007) which indicate that the ability to conduct effective classroom management is an important quality of an effective language teacher. They demonstrate a strong relationship between teachers' classroom management skills and student achievement. In addition, the findings of survey done by Egeberg, McConney, and Price (2020) agree with findings of current study since the report says that creating positive relationships with students, managing classrooms by establishing clear boundaries and high expectations are built by effective classroom management. It was also found that teachers' management of their classroom and their ways of creating classroom situation affect the teaching and learning programs. Moreover, what was found by Hosseinnia et al. (2019) in their development of a scale for EFL teachers' professional competencies is supported by the current study since both studies recognized that professional competencies include abilities classroom strategy and classroom administration. In line with findings of Emiliasari (2018), TPC is regarded in terms of classroom management and understanding the students' characteristics for the purpose of greater practice of pedagogical competence in the classrooms. Several studies (e.g., Apelgren & Giertz, 2010; Avramidis & Norwich, 2002; De Boer, Pijl, & Minnaert, 2011; Liakopoulou, 2011; Magno & Sembrano, 2008) argue that having teachers' attitude that best promotes student learning can be seen as the cornerstone of PC, and the attitude teachers adopt to their role is an essential factor in their effectiveness.

It is believed that teachers' attitudes are very important variables in the implementation of successfully inclusive practices (Avramidis & Norwich, 2002). A great deal of patience, courage, and stubbornness is required to establish an attitude that promotes continuous development of PC (Parasuram, 2006). In the meantime, teachers' attitude is a decisive component in ensuring the successful inclusion of students (De Boer, Pijl, & Minnaert, 2011). Simply put, the attitudes of teachers can enhance or impede implementation or inclusion. Thus, English language teachers' commitment and interest for continuous development of their profession ought to be made use of to a greater degree with appropriate resources for the purpose of achieving student learning. In support of the findings of the current study, Ghafoori and Baharlooie (2020) assert that teachers' being aware of their attitudes is a bridge for exploring teachers' and students' satisfaction with process of language acquisition. Additionally, it paves the way to make sure about the right selection of the teaching techniques.

The findings related to the components of belief are supported by many studies (e.g., Barcelos & Kalaja, 2011; Borg, 2015; Brown, 2009; Kalaja, 2011; Song, 2015; Tapia, 2013; Yuan & Lee, 2014) which argue that teacher beliefs about language learning and teaching can influence their decision-making and classroom practices. According to Borg (2015) and Yuan and Lee (2014), notwithstanding the fact that there exists a potential disparity between the teachers' beliefs and practices, the development of EFL teachers' beliefs can greatly influence their teaching performances. The researcher believes that belief is a driving force and engine for developing PC. Teachers' beliefs and their profession toward the goal of enhancing student learning is based on what they think of language and language learning and the way they see their teaching profession, in particular. Teachers' beliefs forecast, reflect, and ensure their real teaching practices (Wilkins, 2008). This implies that how teachers teach can be different even when they hold similar knowledge and skills, depending on their beliefs (Nugroho & Mutiaraningrum, 2020). Teachers' beliefs are recognized even more dominant than their knowledge and pedagogy (Kim, Kim, Lee, Spector, & DeMeester, 2013).

In general, the newly added components of belief and attitude in the present study gained high loadings in the view of teachers. This accords with Williams and Burden (1997) who assert that teachers' deeply rooted beliefs about language learning would infuse into their classroom performances more than a particular methodology, and that teachers' beliefs and attitude unconsciously drive teachers to adopt different teaching-learning methods. However, in many EFL context, EFL teachers' are frequently challenged by a variety of constraints, i.e. limited resources, a stiff school curriculum, and institutional support (Zheng & Borg, 2014). These limitations lead to the disparity between EFL teachers' beliefs and practices, particularly in teaching English by integrating digital technology. Although some disparities existed, the reasons were determined by some teaching contextual factors, such as the lack of teaching preparation and the level of language proficiency. Therefore, as Lan and Lam (2020) argue, it is strongly suggested

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for EFL teachers to systematically and regularly scrutinize the correlation between their beliefs and teaching practices for a better quality of their teaching practice.

6. Conclusion

The EFA employed on ELTPC instrument excluded 7 items and yielded seven factors with 53 items. The factors included Preparation (8 items), Management (7 items), Teaching (8 items), Assessment (7 items), Subject mastery (9 items), Attitude (8 items), and Belief (8 items). Thus, the final version of the developed ELTPC instrument consists of 53 items in seven dimensions, which is neither short nor long, and is easy to use. Having finished EFA, a validated form of the ELTPC instrument can be claimed to be developed. Defining the standards for evaluating teachers' pedagogic performance, the researcher emphasized the ones that characterize the pedagogic work of teaching staff, which include the standards of beliefs, attitude, planning, subject mastery, teaching the subject, management, and assessment. It appears that the mentioned standards for evaluating pedagogic competence of teachers completely represent their work. The standards of evaluating the ELTPC are the relatively fixed demands for checking the results of implementing the curriculum of a subject at school, and they adequately define the level of all the components of their pedagogic activity that are interchangeably linked to each other in order to provide the promotion of educational services.

6.1 Implications

The result of this consideration will also be a good contribution to the development of the mentioned standards based on which ELTPC can be qualitatively and quantitatively measured. These standards according to Crooks, (as cited in Celik, 2011) should be used as guidelines for work within language teaching context and allow for English teachers professional competence. Accordingly, for designing tools that evaluate teacher performance, and for creating an effective program for professional development (Grobgeld, Teichman-Weinberg, Wasserman, & Barchilon Ben-Av (2016), a consideration of TPC is of prime importance.

In terms of teachers' competence, they need to be prepared before immersion: knowledge, skills, attitudes, values, abilities, and experience (Genvieve, 2017; Samusevica & Striguna, 2017). Today, the training of qualified, competent, and dedicated teachers with all the essential pedagogical and content knowledge and skills is considered to be increasingly significant, but there are still doubts as to whether pre-service teachers are adequately prepared to meet the challenges of the classrooms of the 21st century (Ismail & Jarrah, 2019). As teachers guide the activities done by students in order to produce learning in direct, indirect, structured, and unstructured ways (Ghavidel & Valipour, 2021), the need to refresh their learning in theory and subject courses, teaching methods, strategies, and techniques and demonstrate the pedagogical material skills they gained from related courses prior to their teaching immersion (Greathouse, Eisenbach, & Kaywell, 2019; Wall, 2016).

It is important to observe that the developed ELTPC scale is subject matter specific, so it cannot be used in different classrooms. Additional research is needed, however, to replicate and refine the scale and its utility in assessing PC in different levels and courses of education. It can be inferred that there is a correspondence between the teachers' acknowledgment of what and how students learn, along with the conditions for that learning, and the teachers' success in teaching. Thus, PC can be described as the ability to manage learning, which includes planning (preparing), implementation, and evaluation of learning outcomes of learners based on teachers' attitude and belief in order to promote the learning of learners in an outcome-based approach. PC should reflect the teachers' competence in regard to their synergistic combination of resources in order to promote the quality of pedagogy for achieving higher learning levels. A teacher's pedagogical work needs to be given a more prominent place through the requirement for PC and training in pedagogy for appointment as a teacher in an educational system.

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