

Validating a Continuing Professional Development Scale among Iranian EFL Teachers

Anis Behzadi^{1*}, Mohammad Golshan², Sima Sayadian³

^{1*}, Department of English, Maybod Branch, Islamic Azad University, Maybod, Yazd, Iran, *anis.behzadi@yahoo.com*,

², Assistant Professor, Department of English, Maybod Branch, Islamic Azad University, Maybod, Yazd, Iran, *mohammadgolshann@gmail.com*

³ Assistant Professor, Department of English, Maybod Branch, Islamic Azad University, Maybod, Yazd, Iran, *simasayadian@gmail.com*

Abstract

Some EFL teachers have tragically fossilized in their career and have reluctantly participated in teachers' in-service classes. Teachers Continuous Professional Development (CPD) is an indispensable part of teaching career. Accordingly, the current study was to design, develop, and validate items for an effective scale for CPD programs in Iranian English foreign language context. In fact, factor analysis was the main concern in this study. Initially, the tentative model with 55 items was piloted and tested through exploratory and confirmatory factor analysis on a sample of 400 English as a foreign language (EFL) teachers. This level resulted in the removal of 8 items in the sample loaded and led to the final CPD inventory with 47 items. Convergent validity of the CPD variable was derived from the output of confirmatory factor analysis in the Lisrel Software. The significant score of all model parameters was larger than 1.96. Therefore, the validity of the construct of measuring the relevant variables was substantiated and confirmed at a significant level of 0.05. Furthermore, the result indicated that the research model was in the domain of acceptance. Also, convergent validity was confirmed and validated. The fitting indexes of the model also revealed that the measurement models were substantiated in terms of external validity. The findings of this study can offer pedagogical implications to English teaching and learning stakeholders, educational policy makers, officials, and those involved in second language teacher education as well as English language teachers in EFL contexts.

Keywords: Continuous Professional Development, EFL Teachers, Validation

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1. Introduction

English language teaching (ELT) is one of the most significant fields due to the importance of English around the world, and an English language teacher has to keep updated with the changes and innovations in their field. According to Luke and McArdle (2009), professional development is a pivotal element in teachers' development. On the other hand, the new century witnessed the emergence of a number of educational theories and methods to improve the quality of teaching and learning process. It seems that CPD is growingly becoming an essential element for teachers' career advancement (Asmari, 2016).

It is crystal clear that teachers' professional development (TPD) can offer opportunities for serious and promising educational reforms. Teachers need to learn new methods and updated ways of teaching that translate into long-term developmental processes (Hooks, 2015). To meet all of these demands, the CPD of teachers is recognized as vital to enhancing the quality of teaching and learning. It is presumed that CPD is necessary to raise the quality of educational standards because teachers need to go ahead continually by equipping themselves with the knowledge and skills to enhance their teaching skills and students' learning opportunities (Chenge, 2017). Besides coping with the change, a teacher needs to be a great role model for his/her students as a life-long learner, so he/she must exhibit the deep dedication and enthusiasm towards continuous learning because the primary responsibility of a teacher is to make their students life-long learners and keep them motivated (Ermeling, 2010). It is said that if teachers' professional development activities are detached and separated from the actual classroom engagement, it may create a feeling that their professional development experience are "meaningless and wasteful" (Guskey, 2003).

Interestingly enough, CPD program can be very advantageous and fruitful if it is systematically implemented according to teachers' immediate needs (Lustick, 2011). It is obvious that CPD is a career-long obligation for practicing professionals; therefore, its great importance should not be underestimated or neglected. Therefore, in order to have a dynamic and beneficial continuing professional development, the CPD activities should appropriately be engaging and fun for all participants.

However, sometimes it is difficult to find a relevant course that fits all of the participants need. Technically, one of the most important benefits of CPD is that it can transfer a deeper understanding of what it means to be a professional, along with a greater appreciation of the implications and impacts of teachers' work. In other words, it can easily help teachers to advance their body of technical knowledge.

The current study worked on teachers continuing professional development. In practice, the importance of this study is to design, develop, and validate items for an effective scale for CPD programs in Iranian English foreign language context. What is more, it can also provide valuable information to educational leaders, subject advisers and teachers of English who have long strived to use professional development as a means of deepening content knowledge and teaching practice. Most importantly, developing a CPD inventory could familiarize the teachers with the newest teaching methods.

To some EFL teachers, CPD is seen as a burden and not as an opportunity to improve their practice as the reform has intended (Avalos, 2011). This happens as the teachers are made to take part in various standardized professional development programs that are not tailored to their specific needs. As a result, teacher training become less effective in helping the teachers improve their own practice (Zoller, 2015). According to Abell and Lee (2008), CPD is for teachers with teaching experience who would like to advance their teaching strategies. To put it simply, it seems that some EFL teachers have tragically been fossilized or burnt-out in their career and are reluctant to participate in in-service classes. The scanty literature on Iranian EFL teachers' professional development reveals that, to date, no serious research studies have been completed in this context in order to operationalize and evaluate the CPD methods in teaching English in Iran although it is clear that lack of CPD can readily diminish the quality of teaching and learning English. Accordingly, the main purpose of the current study is to design, develop, and validate items for an effective scale for teachers Continuing Professional Development (CPD) programs. The design, development, and validation of items is the first step in developing the instrument. Therefore, this study focused on the development and validation of CPD programs related to effective practices for EFL teachers' instruction for use in providing a formative evaluation to EFL teachers in Iran. Accordingly, the study is based on the following research questions: What are the components of a teacher's CPD method scale? Also, do the inventory items have content validity, construct validity and internal consistency? The details of the development and validation of an English language teacher continuing professional development inventory are clarified below.

To design and determine the construct validity and reliability of items for a CPD instrument in Iran, the following research questions proposed:

1. What are the components of a teacher CPD scale?
2. Do the items have content validity as demonstrated by the judgment of experts?
3. Do the items have construct validity?
4. Do the items have internal consistency?

5. Do the items have external validity?

2. Literature Review

Professional development has long been accepted and acknowledged as an important factor in maintaining and enhancing the quality of teaching and learning in EFL schools and institutions. Interestingly, it has vastly been noted and confirmed that where EFL teachers are able to access new ideas and to share experiences more readily, there is greater potential for school and classroom improvement in teaching and learning English (Asmari, 2016). Nowadays, teaching and learning in a continual professionally developing world is demanding and complicated. Therefore, the necessity of keeping up to date with the ever-changing world of science cannot be underestimated or even neglected in 21st century. In particular, it is essential in the current society and contemporary advancements that have been taking place every single day and transferring high standards of education (Ermeling, 2010).

According to Stes, Min-Leliveld, Gijbels and Van Petegem (2010), teacher professional development is a term including a lot of teacher education programs, plans or experience which may adjust from workshops to critical reflection on teachers. Teacher professional development is a foundation of educational improvements which explores to enhance student achievement (Morgado, Meireles, Neves, Amaral, & Ferreira, 2017; Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009; Hoewook, & Hyunjin, 2010). Furthermore, according to Lawless and Pellegrino (2007), teacher professional development plays a major role in developing teachers' instructional actions in the content areas and knowledge of standards-based evaluation.

In fact, teacher professional development is about teachers "learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students' growth" (Avalos, 2011). In the related literature, different endeavors have been made to better understand teacher professional development (e.g., Freeman, 2001; Freeman & Johnson, 2005; Richards & Farrell, 2005). Also, to study the impact of teachers professional development programs on their students' achievements (Abell & Lee, 2008; Avolas, 2011; Harris & Sass, 2007; Lovett, Lacerenza, de Palma, Benson, Steinbach, Frieters, 2008; Vogt & Rogalla, 2009). Besides, to increase student motivation (Ermeling, 2010; Frey & Fisher, 2009; Guay, Valois, Falardeau & Lessard, 2016; Levine & Marcus, 2010; Morais, Neves, & Alfonso, 2005; Seymour & Osana, 2003). Even though the effectiveness of teacher professional development on teacher and student success was highlighted, no particular instrument has been reported for introducing and evaluating different methods of CPD.

According to Topolinski (2014), in-service training is considered as a professional duty in about a half of all European states, but it is in practice optional in many of them. Motivation and incentives to encourage participation in CPD are not sufficient. There have been some researchers that conducted research studies about professional development (Asmari, 2016; Christen Conklin Topolinski, 2014; Katalin Zoller, 2015; Koellner & Jacobs, 2015; Mpho, Dichaba, Matseliso & Mokhele, 2012; Sebastian Hooks, 2015; Richards & Farrel, 2005). Accordingly, there is a need for finding out innovative and systematic approaches to teachers' professional development, including factors that have strong contributions to teachers' professionalism. Interestingly, although the recipient of CPD is the teacher, the ultimate beneficiary is the student.

3.Method

3.1. Participants

The participants of this study were 400 EFL teachers both males and females. They were all Persian speakers from Sirjan in Kerman Province, Iran. Strictly speaking, 400 EFL teachers at different language institutions and centers of higher education were considered to participate. 132 males (32.7%), 270 females (67.3 %). The age range of the participants was between 19 and 59. To illustrate, participants majored in English language teaching, English translation, English literature and other majors. They were holding English diploma, BA., MA. and Ph. D degrees.

3.2. Materials and Instruments

3.2.1. CPD Instrument (Questionnaire) Development

Two main steps were conducted in this study. First, a teacher continuing professional development (CPD) inventory was developed and second it was validated based on the collected data from a number of Iranian EFL teachers. In the following parts, the instrument development and validation are explained in detail.

3.3. Procedure

To start the first phase of this study; in other words, teachers CPD inventory development, a comprehensive review of the related literature pertinent to CPD was employed to assess the related constructs in CPD. This was purposefully done to check any current models as well as instruments that might already exist in this field. Regarding items generation, a combination of deductive and inductive approaches was applied. In fact, deductive approach to item generation involves an extensive literature review, while an inductive approach relies on individual responses, such as asking a sample from the target population to describe their feelings or

behaviors (Chenge, 2017). Accordingly, the researchers not only reviewed the related literature on teachers CPD but also had a focus group interview with some EFL teachers to gain more information. This is purposefully done to check any current models as well as instruments that might already exist in this field. In fact, the standard procedures were essential to develop an academic instrument. Therefore, the standard procedures for developing a valid and reliable instrument were meticulously selected (Brown, 2004 & Dornyei, 2007). Interestingly enough, the comprehensive and rich related review of the literature about teachers CPD methods paved the way for the researchers so as to design the draft of the constructs and concepts which were considered to be pertinent to CPD.

Initially, the construct was clearly defined both theoretically and operationally. In other words, the dimensionality of the construct was clearly identified. In fact, many constructs are multidimensional; that is to say, they are composed of several related components. To thoroughly assess the construct, one may consider developing sub-scales to assess the different components of it. Therefore, after identifying the main construct of the study, sub-components were systematically developed. Following that, the scale format, number of items were specified. After writing the items, repeated items were deleted and the list was reduced to 80 items. After that, the content validity was evaluated. Technically, content validity commonly refers to the degree to which the sample of test represents the construct that the test is designed to measure. In this study, content validity was defined as the degree to which the items represent the teachers CPD methods identified in the related literature of review and the interview that was already done. To do so, the following steps were meticulously considered.

In fact, in order to check content validity some steps were taken: Firstly, selection of a panel of experts. Secondly, distribution of the instrument prototype to the panel of experts and ultimately, selection of the final items and domains for the inventory. Koellne and Jacobs (2015) noted that when these steps are thoroughly completed, the content validity of the observation instrument is established.

First and foremost, to evaluate the *content validity*, five professional field-specific experts in English Language Teaching (ELT) were asked to consider and assess the components and subcomponents of the instrument and give their suggestions and comments for each components and subcomponents improvement. The panel of experts included experts in teaching English at the university of Sirjan, Kerman, Yazd and Tehran. The initial pool was sent to the experts directly and indirectly to establish content validity of the items to the target population. After the thorough analysis of the experts' opinion on the item's clarity and readability, some items were

finally removed or revised in the wordings and structure. Based on the frequency which each item was selected as relevant. Ultimately, 55 items were left for inclusion in the final version of the inventory. Simply put, the major role of the experts was to review the domains and the items, to identify misinterpretations and omissions from the research, to provide comments on the clarity of the domains and indicators, and to suggest revisions.

Secondly, in order to obtain feedback about the structure of individual items within the survey, check the component make-up of the inventory and make sure of item redundancy, clarity, and readability, a small sample of participants, about 400 EFL teachers were invited to participate in a pilot study and have an analytic examination at the instrument. In fact, these participants were not included as part of the sampling for the main study. The purpose of a pilot study is to improve the questions and format of the survey (Creswell, 2003). Participants for pilot testing were purposively selected with similar features of ultimate participants. Each pilot participant was sent an email by the researchers and was asked to answer the questions. Also, they were asked to send comments about the clarity of directions and length of the survey.

The pilot study helped to ensure clarity regarding the procedure, instructions, and wording of statements, and to determine a reasonable time estimate for inclusion in the invitation for the main data collection. As for the format, a 5-point Likert scale ranging from '*strongly agree*' to '*strongly disagree*' was selected. In fact, the benchmarks for questionnaire development was proposed by Brown (2004) and Dornyei (2007). Lastly, all the developed items were checked once. This step of the analysis resulted in the sub-components of CPD to be measured and validated in the subsequent phases of the study.

3.4. Data Analysis

Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were applied to determine the validity of the items by analyzing the strength of the relationship between the items.

4. Results and Discussion

4.1. Results

4.1.1. Exploratory Factor Analysis

Exploratory factor analysis was applied so as to identify the categories and to reduce and summarize the data. Before the data were used for factor analysis, the KMO and Bartlett's test of sphericity was implemented on the data to confirm the adequacy of the data. In fact, there are three steps in factor analysis: application of KMO-Bartlett test, extraction

of common value of components, calculation of the total value of explained variance, and rotation of the items to get a final answer. They are displayed and elaborated in details in the following parts in turn.

4.1.2. Step One: Discovering the Possibility of Performing Factor Analysis

First and foremost, to understand the possibility of performing factor analysis on the data, KMO-Bartlett's test was used so as to investigate whether the variables were correlated or not. In fact, Kaiser-Meyer-Olkin (KMO) Test was a measure of how suited the data were for factor analysis and it measures sampling adequacy for each variable in the model and for the complete model (Habibpour & Safari, 2012, p. 320). The statistic is a measure of the proportion of variance among variables that might be common variance (Habibpour & Safari, 2012, p. 321). The lower the proportion, the more suited your data is to Factor Analysis. KMO results values were between 0 and 1. The precise results are presented in the (Table 1).

Table 1

KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.906
Bartlett's Test of Sphericity	Approx. Chi-Square	16650.596
	Df	1485
	Sig.	.000

Technically, the values below 0.7 for KMO implies that "it is not possible to perform factor analysis for the data, or the results obtained from the factor analysis of these data are not useful" (Habibpour & Safari, 2012, p. 322). As the KMO sample sufficiency measure of 0.906 indicated, this value was higher than 0.7 in this study; therefore, it was possible to perform a factor analysis for the data in the current study. "When the Bartlett test value is less than 0.05 at the error level, there is a significant relationship between the variables and it is possible to discover the new structure of the data" (Habibpour & Safari, 2012, p.p. 322-323). A significant level in the table revealed that this value was less than 0.05; therefore, factor analysis was appropriate for discovering the new structure of the data (factor structure).

4.1.3. Step Two: Extraction of Common Value of Components

This step involved extracting the commonalities (Table 2). This table contains two initial columns and extraction. The amount of subscription of a variable, which is equivalent to the coefficient of determination (R²) in the multivariate regression analysis, means the variance of that variable, which is explained by all the final factors. In fact, "the share of each variable is equal

to the sum of the factors of the factor load of that variable in common factors" (Habibpour & Safari, 2012, p. 331). The initial column represents the total variance for each factor before the factor is extracted. As it was displayed in the table, the value for all was 1. The value of this variance varied from 0 to 1. The closer the values to the number 1 are, the better the factors of the extracted variables are. As a general rule, the variables that the agents failed to determine over 0.5 (50%) of its changes are determined by modifying or deleting the variables so that later it is difficult to select and categorize the agents (Habib Pour & Safari, 2012, p. 346). Accordingly, based on the common value of the items, item 8, 16, 27, 39, 42, 47, 49 and 52 were left out of the analysis as their productivity declined.

Table 2

Extraction of the Common Items of Components

Questions	Initial	Extraction	Questions	Initial	Extraction	Questions	Initial	Extraction
Q1	1	.625	Q20	1	.835	Q39	1	.383
Q2	1	.674	Q21	1	.856	Q40	1	.469
Q3	1	.618	Q22	1	.619	Q41	1	.586
Q4	1	.753	Q23	1	.544	Q42	1	.257
Q5	1	.686	Q24	1	.640	Q43	1	.739
Q6	1	.515	Q25	1	.741	Q44	1	.751
Q7	1	.726	Q26	1	.757	Q45	1	.707
Q8	1	.426	Q27	1	.233	Q46	1	.749
Q9	1	.458	Q28	1	.743	Q47	1	.207
Q10	1	.765	Q29	1	.764	Q48	1	.718
Q11	1	.734	Q30	1	.575	Q49	1	.167
Q12	1	.729	Q31	1	.779	Q50	1	.780
Q13	1	.587	Q32	1	.825	Q51	1	.559
Q14	1	.625	Q33	1	.786	Q52	1	.376
Q15	1	.569	Q34	1	.842	Q53	1	.632
Q16	1	.368	Q35	1	.780	Q54	1	.706
Q17	1	.911	Q36	1	.624	Q55	1	.661
Q18	1	.612	Q37	1	.642			
Q19	1	.678	Q38	1	.643			

Table 2 shows that the existing variables could be converted into factors, and these factors included a low percentage of the variance. Furthermore, it indicated the validity of the items.

4.1.4. Step Three: Total Value of Explained Variance

The third step is calculating the total amount of explained variance. Accordingly, Table 3 (See Appendix 2) shows that existing variables can be converted into several factors, and these factor included a low percentage of the variance and also indicated the validity of the questions. The factor analysis was performed by SPSS software on 55 questions. As it was

mentioned in the previous parts, item 8, 16, 27, 39, 42, 47, 49 and 52 were excluded from the rest. According to the Table 3, eleven major factors were extracted. These eleven factors accounted for and confirmed approximately 71.746 percent of the 47 items associated with CDP variables.

According to the Table 3, referring to the Kaiser criterion, only agents were selected whose values are more than one (Habib Pour & Safari, 2012, p. 350). In this table, eleven factors with special values are higher than one; therefore, the results indicated that the software placed items in eleven main factors with 47 items.

4.1.5. Step Four: Rotation of the Items to Get a Final Answer

In this step, we need to use the results of Table 4 (See Appendix 3) as the Rotated Matrix of Components to classify the items based on the factor load. It revealed the matrix of correlation between terms and factors after rotation.

4.1.6. Confirmatory Factor Analysis

In this stage, the items used in the questionnaire should be categorized by the variables of the research in terms of fitness of the model to be evaluated. Using the structural equation modeling (SEM), the accuracy of the measurement of the structures is investigated by the relevant indexes. In this section, using confirmatory factor analysis, it is determined whether the designed and developed items can really measure the validity. Are the extracted factors well relevant at the macro level with the other variables? In the Table 5, the concepts and research factors along with the equivalents are shown in order to pave the way for looking at the paths of the factor analysis used in the equation.

4.1.7. The Standard Coefficients Path of the Factor Analysis

In the following section, the results of the confirmatory factor analysis of the research variables are presented by the LISREL 8.80 software. In confirmatory factor analysis, the researchers can technically identify what items are related to what aspects and factors. The standardized coefficient model (Fig. 1) can be used to find a significant and meaningful correlation between the corresponding variables and the corresponding indexes. Standardized coefficients, in fact, represent the coefficients path or standardized load factors between factors and markers. Statistically, to have a valid questionnaire, a significant correlation should be between structure and dimension, and between dimension and index. The Standard Estimation Model is a model that derives from the matching of two covariance matrices of the data model and shows the true estimation of the model parameters. In this model, the level of relationship between structure and dimension; also,

dimension and index are shown. As it can be seen, all of the indexes considered for all questions related to the variables of the model have a correlation above 0.5. The details have been revealed in the figure below.

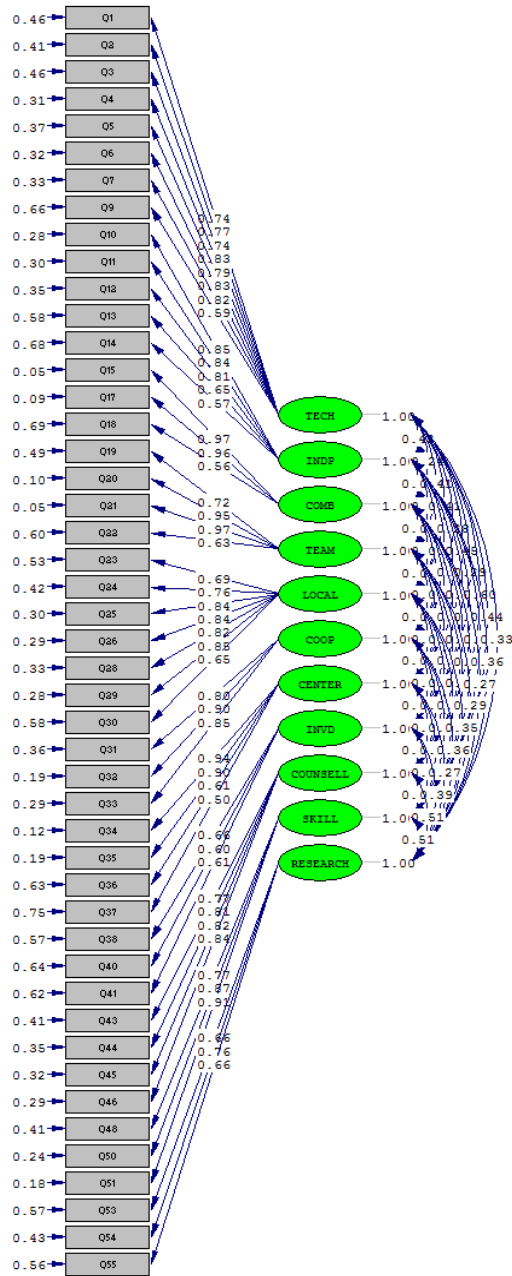
Table 5

The Concepts and Research Factors along with their Equivalent in the Model

<i>Factor's Name</i>	<i>Abbreviation</i>
Technological teachers CPD programs	TECH
Independent teachers CPD programs	INDP
Combinational teachers CPD programs	COMB
Team work teachers CPD programs	TEAM
Local problem solving teachers CPD programs	LOCAL
Cooperative teachers CPD programs	COOP
Centeralized and standard teachers CPD programs	CENTER
Individually tailored teachers CPD programs	INDIV
Counseling and professional rapport teachers CPD programs	COUNSEL
Skill-based teachers CPD programs	SKILL
Research-based teachers CPD programs	RESEARCH

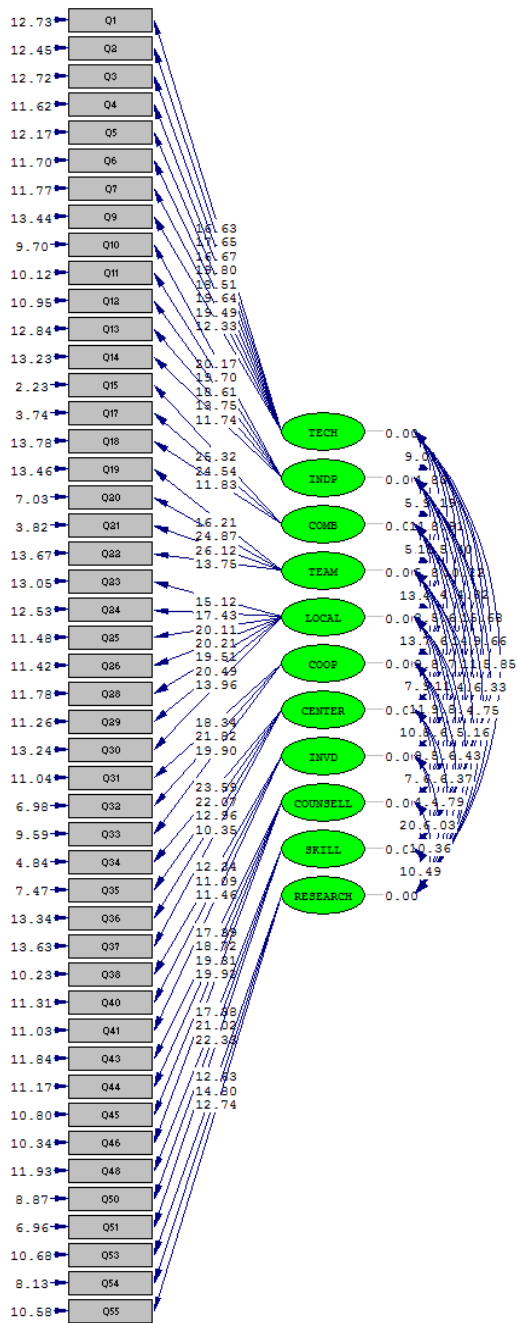
4.1.8. The Standard Coefficients Path of the Factor Analysis

The meaningful model of numbers (Fig. 2) is presented to recognize whether the relationship between structure and dimension and the relationship between dimension and dimension were significant. The t-value model shows the meaningfulness of each of the parameters, and if the value is larger than the absolute value of 1.96, the parameters of the model are meaningful and significant. The validity of the constructs measuring the relevant variables was substantiated and confirmed at the level of 0.05. The following figure shows the details (Fig.2).



Chi-Square=2973.88, df=979, P-value=0.00000, RMSEA=0.072

Figure 1. The Standard Coefficients Path of the Factor Analysis of the CPD Variables



Chi-Square=2973.88, df=979, P-value=0.00000, RMSEA=0.072

Figure 2. The Significant Coefficients of Factor Analysis of the CPD Variables

As Table 6 shows, the convergent validity, confirmatory factor analysis, of the CPD variable is derived from the output of the Lisrel Software; the fitting results of the model and the indicators showed that all identified factors were well measured by the corresponding items of that factor. In other words, the model of the CPD variable, along with the interconnections between them, was confirmed (Fig. 1 & 2). Also, the AVE index indicated that the research model was in the domain of acceptance of this index ($AVE > 0.5$) and convergent validity was confirmed as well.

According to Table 7, the fitting indexes of the model also revealed that the measurement models were confirmed. Accordingly, the measurement model had external validity. As a matter of fact, the acceptance criteria for these indices for the RMSEA and SRMR indexes was below 0.08 and the chi-square with a degree of freedom below 3. To sum up, the NNFI, CFI, IFI, RFI and AGFI indices were more than 0.90, as shown in the Table 7.

Table 7

Results of Fitting Indicators of CPD Variable Model

	Chi/df	RMSEA	SRMR	CFA	IFA	RFI	NNFI
Model	2.99 <	0.072 <	0.064 <	0.94 >	0.94 >	0.92 >	0.94
Fit	3	0.08	0.08	0.9	0.9	0.9	> 0.9
Indices							

- a) The main purpose of the study was to investigate sub-components of teachers CPD methods, under the umbrella term of continuous professional development. The empirical investigation is administered in an Iranian English L2/FL context through exploratory and confirmatory analyses. It mainly aims at filling a pedagogical gap by proposing and validating a CPD inventory.
- b) It is going to develop and validate a CPD instrument to provide a situation to quantify the construct. It is planned to be conducted by comprehensive review of related literature and focus group interview.
- c) In addition, it is going to collect and report teachers' perception of CPD programs through the medium of developed and validated instrument to determine whether or not CPD programs provide valuable knowledge and insight into the different development of teachers that promotes students' achievement.
- d) Finally, it presents a semi-structured interview with EFL teachers to achieve a deeper and more complete perspective of the existing CPD programs in Iran.

Table 6

The Result of the Questionnaire Constructs Validity

Variable	Factors	Items	Confirmatory Factor Analysis	
			CFA loadings	AVE
TECH		Q1	0/74	0.6571
		Q2	0/77	
		Q3	0/74	
		Q4	0/83	
		Q5	0/79	
		Q6	0/83	
		Q7	0/82	
		Q9	0/59	
		INDP		
Q11	0/84			
Q12	0/81			
Q13	0/65			
Q14	0/57			
COMB		Q15	0/97	0.6487
		Q17	0/96	
		Q18	0/56	
TEAM		Q19	0/72	0.7068
		Q20	0/95	
		Q21	0/97	
		Q22	0/63	
LOCAL		Q23	0/69	0.6699
		Q24	0/76	
		Q25	0/84	
		Q26	0/84	
		Q28	0/82	
		Q29	0/85	
		Q30	0/65	
		COOP		
Q32	0/90			
Q33	0/85			
CENTER		Q34	0/94	0.5912
		Q35	0/90	
		Q36	0/61	
		Q37	0/50	
INVD		Q38	0/66	0.6107
		Q40	0/60	
		Q41	0/61	
COUNSEL		Q43	0/77	0.6982
		Q44	0/81	
		Q45	0/82	
		Q46	0/84	
SKILL		Q48	0/77	0.6854
		Q50	0/87	
		Q51	0/91	
RESEARCH		Q53	0/66	0.6793
		Q54	0/70	
		Q55	0/66	

CPD

4.2. Discussion

The main purpose of the study was to investigate sub-components of teachers CPD methods, under the umbrella term of continuous professional development. The empirical investigation was administered in an Iranian English L2/FL context through exploratory and confirmatory analyses. It mainly aims at filling a pedagogical gap by proposing and validating a CPD inventory. Exploratory factor analysis was applied so as to identify the main factors and to summarize the data. Before the data were used for factor analysis, the Bartlett and KMO test was implemented on the data to confirm the adequacy of the data. Considering that all the significant numbers of all model parameters were larger than 1.96; therefore, the validity of the constructs of measuring the relevant variables was substantiated and confirmed at a significant level of 0.05. The convergent validity (confirmatory factor analysis) of the CPD variable was derived from the output of Lisrel Software; the fitting results of the model and its indicators revealed that all identified factors were well measured by the corresponding questions of that factor. In other words, the model of the CPD variable, along with the interconnection between them, was confirmed. Also, the AVE index indicated that the research model was in the domain of acceptance of this index ($AVE > 0.5$) and convergent validity was confirmed on the level of the structure. The fitting indices of the model also showed that the measurement models were approved and confirmed. In fact, the measurement model had external validity. Pedagogically, according to the results of the study, as a matter of fact, these kinds of in-service CPD training programs are invaluable and offer information about the needs of teachers for future educational opportunities. It can probably help to tackle in-service training programs to the practical aspects of language teaching.

In addition, the teachers CPD programs delve into more theoretical issues than practical issues of what constitutes a professionally developed teacher. That is to say, they mostly aim at transferring theoretical rather than practical points. However, EFL teachers need practical and updated workshops so as to be familiar with different methods of teaching and learning. In other words, the main purposes of these programs are just to increase Iranian teachers' knowledge rather than to show them what and how professionally developed teachers do in the classrooms. EFL teachers should be fully familiar with all methods of teaching and try to select appropriate methods based upon their own immediate needs. Therefore, different and regular teacher CPD programs should be arranged so as to familiarize the teachers with CPD.

To sum up, a systematic teacher CPD program should provide plenty of support through regular CPD that is designed according to EFL teachers'

immediate need in non-native context. One of the main benefits of using this validated scale is that the level of teacher's readiness and motivation to participate in CPD classes will be identified. Also, by asking their personal opinions about the desired CPD classes, the administrators of CPD can design some classes that the most teachers needed. Furthermore, this scale can help Iranian teachers to be assessed in a regular base and have constant progress in their teaching career.

5. Conclusion and Implications

If CPD programs are systematically tailored for the practical and immediate need of teachers, they can be advantageous for their ultimate progress and improvement. Consequently, the findings of the current study can contribute new insights into the discussion of teaching English in Iran. Additionally, the results may ultimately be fruitful for policy makers so as to implement appropriate mandatory aim-oriented CPD classes for EFL teachers and contribute directly to a better understanding of professional development that improves quality teaching. What is more, it is valuable for English teachers, officials, educational leaders and policy makers to better understand the importance of quality teaching and how effective professional development can improve it. In other words, the rationale behind designing of this study was developing and validating an inventory to examine different teachers' CPD methods. Likewise, by using this validated and authenticated CPD inventory, language teachers can hopefully find appropriate methods to improve their teaching career. To sum up, it can pedagogically be concluded that the findings of this study hopefully offer pedagogical implications to language educators, government officials involved in language teaching and learning curriculum development as well as English language teachers in EFL context and those involved in private language teaching and learning institutes and centers of higher education in Iran. Accordingly, it can be suggested that the other researchers replicate it in the other contexts as well. It may lead to further information and probable modifications. Also, this research study can be further replicated to involve more EFL teachers to increase the validity and reliability of its findings.

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Appendix 1

Teacher's Continuing Professional Development (CPD) Inventory

(Item pool)

Gender: Male / Female

Age: 19-29/ 30-39/ 40-49/ 50-59

Teaching experience: 1-5/ 6-10/ 11-15 / 16-20/ 21 plus

Educational Degree: Diploma / BA / MA / Ph.D/ others

Dear respondent: This instrument is developed so as to probe Continuous Professional Development(CPD) among Iranian EFL teachers. In fact, this is not a test, so there are no *right* or *wrong* answers and you do not even have to write your name on it. We are interested in your personal opinion. Please give your answers sincerely, as only this will guarantee the success of the investigation. Please encircle one (and only one) number for each item which best describes your idea about CPD and please don't leave out any of them. The information will be kept confidential and will be used just for research purposes. Thank you very much for your time and participation.

5 = Strongly agree 4 = Agree 3 = So-so 2 = Disagree 1 = Strongly disagree

Teachers CPD Methods					
A) Technological Teachers CPD Method					
1-I take part in a teacher training program that involves lots of workshops and training sessions that includes technological devices such as: computers, the Internet, etc.					
2-I take part in a teacher training program that is centralized and teachers share information and skills on the net.					
3-I take part in a teacher training program that explores new concepts and demonstrates modeling of skills that includes computers and the Internet					
4-I take part in a teacher training program that is helpful in teachers' exploration of new ideas and ways of doing things via the internet.					
5-A teacher training program that I take part demonstrates systematic pedagogical knowledge and instructional methods by using the internet.					
6-I take part in a teacher training program that the presented materials are centralized for all the teachers by the net.					
7-It is a good idea to have teacher training workshops or meetings by using technological devices.					
8-If a teacher training program improves building awareness about computers, learner-centered instruction or new curricula, it can be very useful for teachers.					
B) Independent Teachers CPD Method					
9-I take part in a teacher training program that involves teacher's independent learning by introducing some educational books.					
10-I take part in a teacher training program that involves using my own available resources.					

11-I take part in a teacher training program that helps me to be an autonomous lifelong learner.				
12- A teacher training program that involves teachers in designing their own professional development and sharing pedagogical materials is useful.				
13-A teacher training program that makes teachers independence is essential for teachers' pedagogical improvement.				
C) Combinational Teachers CPD Method				
14-I take part in a teacher training program that integrates several different types of teaching models.				
15-Taking part in a teacher training workshop that involves the combination of a number of processes and conditions is motivational.				
16- I take part in a teacher training method that has a strong awareness and control of whose agenda is being addressed.				
17-Learning the mixture of different teachers training methods is helpful for teachers'.				
D) Team-work Teachers CPD Method				
18-I take part in a teacher training program that includes teachers group engagement.				
19-The teacher training workshop that I take part develops teachers' styles of teaching practically.				
20-A teacher training program that I take part helps the teachers to understand and tune their enterprise in mutual team work.				
21-I take part in a teacher training method that the collective wisdom of dominant members of the group shapes other individuals' understanding of the community and its roles.				
E) Local problem solving Teachers CPD Method				
22- I take part in a teacher training program that locally takes place in our own school, institution, resource center or teachers college.				
23-I take part in a teacher training program that teachers work with local facilitators and master teacher's engagement in more gradual processes of learning.				
24-I take part in a teacher training program that often focuses on the specific and local problems that individual teachers encounter as they try to implement new techniques in their classroom practices.				
25-I take part in a teacher training program that helps teachers to deal with the teaching problems in my own class.				
26- I take part in a teacher training program that addresses teacher's local issues and needs over a period of time.				
27- I take part in a teacher training program that locally provides ongoing opportunities for teachers professional learning among a single set of teachers.				
28- A teacher training program that allows more flexible and sustained professional training for teachers own workplace is helpful.				
F)Cooperative Teachers CPD Method				
29- I take part in a teacher training program that involves teachers attending training events and then disseminating the learned information to other colleagues.				
30- I participate in a teacher training program that considers the range of different learning contexts that is useful for me.				
31-When my colleagues share their own learning with me, I will be more motivated.				
32 A teacher training program that mainly focuses on cooperative skills and knowledge rather than individual attitudes and values is useful.				
G) Centralized and standardized Teachers CPD Method				

33-I take part in a teacher training program that teachers try to be reliant on central and stable direction.					
34-The teacher training program that I take part represents a desire to create a stable and standard system of teaching and teacher education.					
35- The teacher training program that I take part generates and empirically validates a standard framework to connect teacher effectiveness and student learning.					
36-The teacher training program that I take part follows a standardized framework for all the teachers.					
H) Individually tailored Teachers CPD Method					
37-I take part in a teacher training program that creates changes in my teaching performance and evaluates my teaching quality.					
38- I take part in a teacher training program that develops my teaching methods and strategies.					
39- I take part in a teacher training program that focuses on teachers individual learning and autonomy in teaching career.					
40- I take part in a teacher training program that makes me to take responsibility and remedy my own professional weaknesses.					
I) Counselling and professional Teachers CPD Method					
41- A teacher training program with counselling and professional friendship is useful and motivational.					
42- A teacher training program that is used in my educational workplace is mutually supportive.					
43-The teacher training program that I take part allows for the two teachers involved to discuss possibilities, beliefs and hopes in a less hierarchically threatening manner.					
44- I take part in a teacher training program that is based upon a range of philosophical outlooks about mutual teaching and learning.					
45- The teacher training program that is used in my educational workplace has one-to-one friendly relationship between two teachers.					
46- A teacher training program that is based on friendly rapport can motivate teachers.					
47-I take part in a teacher training program that teachers can consult with each other to deal with teaching problems.					
J) Skill-based Teachers CPD Method					
48- I take part in a teacher training program that a teaching expert delivers teaching skills.					
49- I take part in a teacher training program that helps me to update my professional teaching skills.					
50- I take part in a teacher training program that easily connects me to the needed teaching skills in my current classroom context.					
51- I take part in a teacher training program that supports a high degree of central control on pedagogical coherence and standardization of my teaching skills.					
K) Research-based Teachers CPD Method					
52- I take part in a teacher training program method that investigates a social and communicative situation.					
53-The teacher training method that considers the teacher as the situational researcher of his/her own class is helpful.					
54-I like to take part in a teacher training program that by which the teachers ask critical questions of their practice					
55-I take part in a teacher training program that concentrates on teachers' autonomy in doing class research.					

"Thank you very much for your time and cooperation"

Appendix 2

Table 3

Total Value of Explained Variance

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Loadings			Rotation Loadings		
	Total	%of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative
Q1	14.743	31.369	31.369	14.743	31.369	31.369	5.587	11.887	11.887
Q2	3.562	7.578	38.946	3.562	7.578	38.946	5.017	10.675	22.562
Q3	2.882	6.133	45.079	2.882	6.133	45.079	3.347	7.122	29.684
Q4	2.378	5.06	50.139	2.378	5.06	50.139	2.994	6.37	36.054
Q5	1.978	4.208	54.347	1.978	4.208	54.347	2.649	5.636	41.69
Q6	1.727	3.674	58.021	1.727	3.674	58.021	2.501	5.322	47.012
Q7	1.607	3.42	61.441	1.607	3.42	61.441	2.438	5.187	52.199
Q8	1.447	3.078	64.519	1.447	3.078	64.519	2.416	5.141	57.34
Q9	1.263	2.687	67.206	1.263	2.687	67.206	2.398	5.102	62.441
Q10	1.106	2.353	69.559	1.106	2.353	69.559	2.36	5.021	67.463
Q11	1.028	2.187	71.746	1.028	2.187	71.746	2.013	4.283	71.746
Q12	0.855	1.82	73.566						
Q13	0.823	1.751	75.317						
Q14	0.722	1.537	76.853						
Q15	0.705	1.499	78.353						
Q16	0.685	1.457	79.809						
Q17	0.63	1.34	81.149						
Q18	0.619	1.317	82.466						
Q19	0.563	1.199	83.665						
Q20	0.547	1.165	84.829						
Q21	0.523	1.114	85.943						
Q22	0.509	1.083	87.027						
Q23	0.474	1.008	88.034						
Q24	0.456	0.97	89.004						
Q25	0.418	0.889	89.893						
Q26	0.41	0.873	90.766						
Q27	0.402	0.855	91.621						
Q28	0.372	0.791	92.412						
Q29	0.358	0.762	93.174						
Q30	0.333	0.709	93.883						
Q31	0.319	0.679	94.562						
Q32	0.292	0.621	95.184						
Q33	0.269	0.572	95.755						
Q34	0.257	0.548	96.303						
Q35	0.247	0.526	96.83						
Q36	0.226	0.481	97.311						
Q37	0.207	0.44	97.751						
Q38	0.192	0.409	98.161						
Q39	0.18	0.383	98.544						
Q40	0.146	0.311	98.854						
Q41	0.116	0.247	99.101						
Q42	0.104	0.222	99.323						
Q43	0.097	0.207	99.53						
Q44	0.072	0.153	99.683						
Q45	0.06	0.127	99.81						
Q46	0.052	0.11	99.92						
Q47	0.038	0.08	100						

Extraction Method: Principal Component Analysis.

Appendix 3

Table 4

Rotatory Component Matrix

COMPONENTS											
										0	1
1	.665	.137	.287	.119	.148	.107	.149	.012	.049	.093	.029
2	.743	.034	.166	.175	.143	.048	.109	.075	.073	.039	.135
3	.735	.151	.149	-.070	.079	.015	.076	.071	.019	.087	.063
4	.827	.099	.137	.121	-.010	.094	.094	.015	.069	.047	.072
5	.767	.143	.123	.070	.165	-.026	.052	.088	.013	.108	.067
6	.813	.132	.124	-.028	.143	.001	.031	.079	.031	.116	.100
7	.815	.105	.135	.090	-.005	.073	.122	.006	.073	.055	.061
8	.426	.270	.106	.193	.077	.076	.003	.156	-.036	.320	-.03
9	.544	.235	.079	.154	.166	.033	.022	.090	.069	.153	.125
10	.198	.194	.078	.772	.151	.115	.153	.076	-.011	-.007	.104
11	.226	.178	.147	.718	.211	-.006	.181	.045	.049	-.006	.117
12	.203	.263	.090	.696	.148	.169	.237	.077	-.001	-.028	.045
13	.018	.260	.231	.635	.108	.149	.090	.035	.126	-.019	.018
14	.026	.045	.282	.654	-.017	-.004	-.040	.023	.268	.123	.138
15	.109	.114	.087	.085	.037	.090	.087	.062	.908	.091	.072
16	-.056	.084	.026	.470	.005	-.035	.032	.170	.368	.378	.013
17	.110	.124	.069	.094	.043	.102	.132	.085	.902	.098	.054
18	.091	.080	.228	.256	.163	.309	-.031	.037	.592	-.094	.003
19	.209	.286	.105	.110	.681	.173	.091	-.001	.022	.057	.147
20	.154	.286	.195	.186	.780	.163	.077	.048	.084	.076	.018
21	.157	.275	.174	.153	.803	.158	.099	.081	.092	.079	.037
22	.272	.190	.123	.115	.658	.078	.093	.052	.028	.127	.091
23	.126	.623	.012	.120	.168	.137	.060	.146	.111	.031	.223
24	.130	.684	.072	.141	.271	.120	.090	-.017	.134	.022	.155
25	.178	.795	.078	.025	.079	.186	.131	.014	.013	.082	.138
26	.101	.821	.089	.149	.081	.118	.040	.103	.090	.024	.038
27	.157	.233	.115	.235	.164	-.093	.000	.085	-.025	.218	.139
28	.167	.801	.096	.056	.072	.137	.082	.023	-.016	.114	.148
29	.108	.819	.114	.123	.129	.142	.062	.092	.076	.019	.004
30	.191	.617	.130	.178	.166	-.079	.006	.105	.089	.181	.125
31	.062	.262	.078	.115	.087	.139	.042	.058	.004	.062	.806
32	.061	.290	.126	.094	.095	.295	.070	.113	.059	.048	.770
33	.137	.230	.136	.132	.078	.210	.044	.090	.095	.110	.775
34	.251	.220	.134	-.035	.083	.230	.131	-.015	.061	.763	.022
35	.232	.243	.104	-.015	.041	.222	.084	-.018	.139	.711	.183
36	.211	.020	.073	.080	.163	.225	.058	.094	-.003	.705	.044
37	.136	.156	.069	.042	.017	.370	.164	-.018	.015	.670	.108
38	.123	.196	.038	.116	.055	.711	.063	.022	.011	.232	.080
39	-.024	.007	.105	.062	.206	.383	-.074	.131	.048	.086	.166
40	-.015	.169	.183	.090	-.014	.557	-.008	.182	.107	.120	.100
41	.067	.079	.006	.001	.210	.682	.026	.072	.198	-.042	.127
42	.259	.056	.257	.116	.126	.120	.084	.135	-.003	-.012	.045
43	.189	.157	.726	.154	.135	.049	.125	.214	.083	.113	.149
44	.254	.123	.728	.132	.128	.063	.152	.154	.101	.067	.094
45	.221	.133	.634	.221	.166	.081	.233	.167	.131	.116	.104
46	.315	.149	.625	.175	.097	.105	.323	.072	.163	.156	.017
47	.280	.158	.207	.135	.055	.137	.305	-.034	.046	.056	.032
48	.142	.112	.327	.108	.063	.092	.694	.210	.056	.140	.052
49	.091	.276	.129	.064	-.062	.031	.167	.289	.143	.009	.113
50	.160	.025	.274	.213	.189	-.037	.724	.159	.049	.105	.156
51	.208	.044	.223	.177	.168	.027	.770	.196	.028	.075	.081
52	.096	.073	.126	.169	.023	.056	.282	.376	.051	-.032	.073
53	.086	.061	.121	.145	.100	.079	.297	.663	.161	-.082	.075
54	.178	.130	.172	.074	-.065	.166	.093	.733	-.001	.071	.126
55	.026	.109	.086	-.083	.100	.074	.043	.749	.025	.126	.100

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