

Construction and Validation of Iranian EFL Teachers' Perceptions of Professional Development Questionnaire

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Abstract

The present study aimed to develop our understanding of various aspects of EFL teachers' perceptions of professional development in Iran using mixed-methods design. After a review of current literature and questionnaires, in the qualitative phase of the study, interviews were conducted with 12 EFL teachers and teaching experts. The data obtained from the interviews was subject to content analysis and the results revealed 4 major themes. In the quantitative phase, based on the findings of the qualitative phase and the supporting literature, a 74-item questionnaire was constructed and administered to 250 participants, after pilot testing and reviewing of the items. The quantitative data was analyzed through Exploratory Factor Analysis (EFA), Principal Component Analysis (PCA) and a 4-factor structure was identified. After modifications in the questionnaire, the final version of the questionnaire was administered again to the participants and Confirmatory Factor Analysis (CFA) confirmed the construct validity of the EFL TPPD questionnaire and the four components. The results revealed that professional development activities, benefits, needs and barriers are the major dimensions of Iranian EFL teachers' perceptions of professional development. The proposed model can have theoretical and practical contributions to EFL teacher professional development.

Keywords: EFL teacher, perception, professional development

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1. Introduction

The professional development of teachers relies on the provision of knowledge, developing their skills, and changing the attitudes and perceptions of teacher candidates and in-service teachers (Wang & Derakhshan, 2021; Zangani et al., 2021). Since teachers have a significant impact on improving the educational systems of the countries as well, the educational systems must try to enhance the performance of teachers in order to improve student learning (Derakhshan et al., 2020; Navidinia et al., 2015). Cirocki and Farrell (2019) also agree that teachers' continuous learning and improvement through professional development plays a major role in the efficiency of the educational systems and student achievement. Though there is a common consensus over the necessity of professional development (henceforth PD), the efficiency of PD initiatives is disputed. As the main recipients of the PD, the efficiency of PD initiatives is contingent upon teachers' attentive engagement in PD (Bolam, 2002; Harper-Hill et al., 2022) which is affected by multiple variables including social, personal and professional matters (Richards & Farrell, 2005; Noonan, 2019).

One of the variables that could guide teacher involvement in PD is teachers' perceptions of professional development. The way teachers view the role of professional development in their practice could direct their efforts in developing professionally (Avidov-Ungar, 2016). There is much evidence revealing the direct and indirect impact of perceptions and views on an individual's behavior, and teachers are no exception (Derakhshan & Shakki, 2019). This pertains to teachers' perceptions of professional development initiatives in the curricula. As the recipients of the PD initiatives are teachers, planning PD and educational reforms may not have the desired impact without taking teachers' views into consideration. Deficiency of PD programs can also lie in the fact that teachers view PD initiatives as top-down processes which are developed and administered to benefit the curricula and advance institutional policies, without consulting with the teachers and considering their needs and learning priorities (Friedman et al., 2001). Consequently, teachers perceive PD initiatives as dreadful formalities that will not directly benefit their everyday practice (Cirocki & Farrell, 2019; Stevenson et al., 2016).

Teachers' views of PD could be driven by various external and internal issues in their personal lives, teaching environment, and the society at large. Identification of the elements of teachers' perceptions of PD and development of a valid and reliable

instrument that encompasses the components, teachers' perceptions could provide worthwhile insights into teacher's perspectives and beliefs of PD and its effectiveness, and guide future research and practice of PD. Particularly in EFL contexts, very few studies have dealt with teachers' perceptions of PD (Cirocki & Farrell, 2019). In EFL contexts like Iran where the teachers are non-native and English is widely taught across public and private sectors by teachers of varying degrees of expertise and experience, the issue of PD could get even more compounded. Considering the variability of PD initiatives in such contexts, little is known about the EFL teachers' perspectives of these initiatives and PD in general. Without such knowledge, PD planning for EFL teachers will remain a top-down process imposed by the authorities and taken ambivalently by the teachers, without real effectiveness (Stevenson et al., 2016).

In order to gain better understanding of Iranian EFL teachers' perceptions of PD, there is a need for studies addressing teachers' point of view and accounts of their PD. However, only a few studies have dealt with EFL teachers' perceptions of professional development (Alibakhshi & Dehvari, 2018; Soodmand & Ghasemi, 2019) and there is a lack of comprehensive instrument for measuring all dimensions of EFL teachers' perceptions of PD since the existing instruments and models have only focused on certain aspects of teachers' PD perceptions, such as PD activities, or have viewed teachers' perceptions of PD as an extension of their motivation to take part in PD or their past experiences thereof. Against this backdrop, the present study adopts a mixed-methods design to construct and validate a questionnaire to assess various components of Iranian EFL teachers' perceptions of PD.

Research Questions

- 1- What are the main components of EFL teachers' perception of PD in Iran?
- 2- Is the EFL teachers' perception of PD questionnaire developed in this study a valid and reliable instrument?

2. Review of Literature

2.1. Teacher Professional Development

There is no consensus over what constitutes professional development for language teachers, and various conceptualizations have been offered on this construct (Adams, 2014; Borg et al., 2018). Most of the controversy has been over the term

'development' and the way it is conceptualized for teachers. Gusky (2000) defines PD as "the process and activities designed to enhance the professional knowledge, skills, and attitude of educators so that they might, in turn, improve the learning of students" (p. 16). More recently, Noonan (2019) defined PD more generally as "activities or relationships intended to support and develop teachers' instructional practices" (p. 1). Central to both definitions are certain activities which, supposedly, lead to teachers' professional improvement.

There is also a distinction between formal and informal PD activities (Cirocki & Farrell, 2019). Formal approaches which include school-based training programs such as in-service-training and job-embedded or in-service training initiatives which are administered by educational authorities (Adekola, 2007). On the other hand, informal PD activities assume teachers' taking responsibility for their professional learning and development. Informal self-directed learning occurs outside the school, and teachers pursue improving their professional knowledge and skills in different areas related to their teaching knowledge and practice (Cirocki & Farrell, 2019).

2.2. Teachers' Perceptions of Professional Development

Previous studies have aimed to conceptualize teachers' views towards professional development by offering different models of teachers' perception of PD (Askari, 2015; Alibakhshi & Dehviri, 2018; Al-Lamki, 2009; Avidov-Ungar, 2016; Badri, et al., 2016; Cirocki & Farrell, 2019; Komba & Nkumbi, 2008; Soodmand Afshar & Ghasemi, 2018; Torff et al., 2005). The conceptualizations and models of attitudes towards PD addressed teachers' views towards PD activities (Askari, 2015; Soodmand Afshar & Ghasemi, 2018; Torff et al., 2005); Teachers' definitions or conceptualizations of PD (Cirocki & Farrell, 2019; Komba & Nkumbi, 2008); Teachers' motivations or aspirations towards PD (Avidov-Ungar, 2016); PD benefits and impacts (Badri et al., 2016; Torff et al., 2005; Al-lamki, 2009), and PD-related decision-making and barriers (Al-lamki, 2009).

In a qualitative study focusing on six Indonesian EFL teachers' perceptions of PD, Hartono (2016) found six main themes including teachers' definitions of PD to the challenges of participating in it. Other themes included reasons, impact, and importance of professional development. The findings of this study suggest that the participants have a wide range of perceptions of PD, but they are more focused on the pedagogical aspects of PD. Besides, Hartono (2016) identifies some major

barriers to PD such as time, funding and motivation as perceived by the teachers.

Hustler et al. (2003) provided a comprehensive review of teachers' perception and experiences of continuous PD in UK. The findings of the study revealed that attitudes towards Continuous Professional Development (CPD) were different according to structural, cultural and contextual differences. Most satisfaction with PD was related to applicability and relevance of PD while negative feelings toward PD originated from perceived 'standardized' and 'one size fits all' view of PD. According to the teachers, a balance was required between the PD needs of the teachers and the needs of the educational system. This report also identified the major PD barriers and challenges perceived by teachers as financial cost (perceived and/or real), distance from training opportunities, and workload, the last especially for older teachers, were important inhibitors of access to CPD.

In an international effort to study teachers' attitudes towards PD, TALIS (Teaching and Learning International Survey) was conducted among OECD (Organization of Economic Cooperation and Development) countries including United Arab Emirates in 2013 (Badri et.al, 2016). The components of teacher attitudes towards PD addressed by this framework were PD needs, impacts or benefits, and the barriers or hurdles perceived by the teachers. This study also compared the perception of teachers towards PD across gender, age, teaching experience and public/private schools.

Nasser et al., (2015) explored teachers' perceptions of a one-year long PD model. They tried to engage the teachers in different types of group and individual interactions. Also, they participated in the community meetings and in-classroom mentoring sessions. Interviews were also conducted to investigate teachers' views about their different mentoring experiences. The findings revealed that focusing on usable knowledge, opportunities for networking with colleagues, and mentors' positive interactions supporting their learning were the most significant perceptions of teachers regarding the PD model.

Komba and Nkumbi (2008) studied Tanzanian teachers' PD conceptions and practices by addressing the nature, importance, organization, motivation, adequacy of and support for PD. The findings of the study showed that the teachers were well-aware of the significance of PD for their practice, yet they believed that the support for PD courses is inadequate. In another study focusing on teacher's PD conceptions and practices, Al-lamki (2009) studied the EFL teachers' PD-related

stated beliefs and practices in Oman. The major components addressed by Al-Iamki (2009) were teachers' beliefs about PD activities, benefits of PD, and PD-related decision making and policy-making.

In Iranian EFL context, Alibakhshi and Dehvari (2018) found out that from the EFL teachers' perspectives, PD was seen as an activity to improve skill development, continuous learning, remaining up-to-date, learning for interest, and professional revitalization. In a survey designed as a part of a PhD dissertation, Askari (2015) measured Iranian EFL teachers' attitudes towards 22 PD activities. In a recent study, Soodmand Afshar and Ghasemi (2019) investigated Iranian EFL teachers' perception of PD through construction and validation of a questionnaire measuring the teachers' perceptions of various types of PD activities. The results of this study showed that the participants perceived professional development enhanced their pedagogical knowledge, improved students' learning outcomes, and helped them understand their own pedagogical weak points and strong points and those of their colleagues. This study also compared high and low experience teachers in terms of their perceptions of PD, and the results of chi-square analyses indicated that high-experienced teachers had significantly more positive perceptions of professional development than their low-experienced counterparts. This study was only focused on Iranian EFL teachers teaching in private schools and it did not cover other EFL teaching contexts such as high schools and higher education. Besides, the study was mostly concerned with the perception of PD activities by teachers rather than perceptions of PD needs and barriers.

Review of the literature and existing models on EFL teachers' perceptions reveals the need for an instrument encompassing various aspects of EFL teachers' perceptions towards PD activities, perceived needs, benefits, barriers, flaws as well as policy and administration issues.

3. Method

The present study aims to construct a valid and reliable instrument to measure Iranian EFL teachers' perceptions of professional development, relying on the literature and interviews with teachers and teaching experts in Iran. The study follows a mixed-methods design and includes qualitative and quantitative phases. The aim of using mixed-methods design was to extract the components of the questionnaire and design items relying on the literature and interviews in the

qualitative phase and then to test the reliability and validity of the questionnaire. In this section the methodological considerations for the qualitative and quantitative phases of the study are presented.

3.1 Qualitative Phase

The qualitative phase of the of the study included review of the previous models of professional development and interviews with the expert teachers and teacher educators working in different teaching contexts.

3.1.1 Participants

In the qualitative phase of the study, a total of 12 participants were interviewed. These participants had the experience of teaching English in various educational contexts in Iran, but they can be generally divided into three major groups based on their current status: EFL teachers in institutes / public schools (N=4), teacher trainers, coaches or supervisors (N=5), teacher education researchers and EFL scholars (N=3). These participants were either PhD holders, PhD candidates or master's graduates in TEFL. Both male (N=5) and female (N=7) participants were included in this phase of the study and the age range of the participants was 31 to 60. The recruitment of the participants followed a criterion-oriented selection method, in which the researcher seeks participants who fulfill the criteria essential to the purpose of the study (Kairuz et al., 2007). The participants in this phase were chosen among the practitioners with very high expertise in their teaching context and EFL teaching in general.

3.1.2 Data Collection

Qualitative data was collected through semi-structured interviews with the participants. The interviews were conducted both face-to face and online and each interview lasted about one hour. During the interviews, the teachers were asked questions about their perceptions of PD based on the cues provided by the literature review and follow-up questions were asked to further explore their perspectives towards professional development. The interviews were audio-recorded, transcribed and analyzed through content analysis to identify the major categories and themes.

3.1.3 Procedure

The present study followed the standard established procedure for the development of behavioral and attitudinal questionnaires in social science and applied linguistics (Dörnyei, 2003). After a thorough review of the existing literature and conceptualizations of PD and teachers' perceptions of PD (Alibakhshi & Dehvari, 2018; Al-Lamki, 2009; Askari, 2015; Avidov-Ungar, 2016; Badri et al., 2016; Cirocki & Farrell, 2019; Komba & Nkumbi, 2008; Soodmand Afshar & Ghasemi, 2018; Torff et al., 2005) the components of teachers' perceptions of professional development were identified as illustrated in Table 1:

Table 1
Components of Teachers' PD Perception in Literature

Component	Main question
PD Activities	Which PD activities are more effective and important?
PD Benefits	What are the perceived benefits of participating in PD initiatives and activities?
PD needs	What are the areas in which EFL teachers need improvement through PD?
PD Barriers	What stands on the way of participating in PD activities and initiatives and how is PD support, or lack thereof, perceived by the teachers?
PD motivation	To what extent are the EFL teachers motivated to take part in PD?
PD inclination.	To what extent are the EFL teachers PD inclined/averse?
PD support	To what extent the teachers perceive support for their PD by the authorities, principals, etc.?

After the review of the existing literature and conceptualizations of PD and teachers' perceptions of PD and identification of the major components of PD based on the literature, semi-structured interviews were conducted with the participants in both face-to-face and online sessions. The aim of the interviews was to verify the identified components in Iranian context and to find out if there are other components in teachers' and teacher educators' perceptions of PD in Iran. The findings of the interviews could also be useful in developing new items to measure the components.

The participants were asked a set of questions dealing with various aspects of

PD in their teaching context and their experiences and perceptions of PD both in their specific context of teaching and in general, and follow-up questions were asked for further clarifications and explanations. Each interview lasted about thirty minutes and, with the participants' consent and permissions, the interviews were recorded and transcribed. The qualitative data was analyzed through content analysis and four major themes were identified as follows:

- perceptions of PD activities
- perceptions of PD benefits
- perceptions of PD needs
- perceptions of PD barriers and (lack of) support

Based on the findings of the qualitative phase, (lack of) PD support was merged into PD barriers and PD motivation and PD inclination were removed from the target components as they were seen as separate constructs rather than components of teachers' perceptions of PD.

Drawing on the item pool from the existing questionnaires and the items constructed based on the findings of the content analysis, the first draft of the 'EFL Teachers' Perceptions of Professional Development Questionnaire' (EFL TPPDQ) was developed. The questionnaire included 74 statements with five-point Likert scale answers. The questionnaire was preceded by a section enquiring demographic information such as age, gender, teaching context, years of teaching experience and educational background. The researchers also provided an introduction section which explained the aims of the questionnaire and offered guidance on how to answer the questions.

3.2 Quantitative Phase

The aim of the quantitative phase of the study was to test the validity and reliability of the designed questionnaire and make further modifications in the questionnaire to ensure acceptable validity and reliability estimates.

3.2.1 Participants

In the quantitative phase of the study, a total of 250 participants filled the constructed questionnaire. The participants in this phase were divided into three

categories in terms of their teaching context, including public school EFL teachers, private institution EFL teachers and university EFL lecturers. Both male and female teachers from various teaching experience background participated in the study. In this study, in terms of years of teaching experience, teachers were defined as low experience (0-5 years), mid-level experience (6-10 years) and high experience (more than 10 years).

3.2.2 Data Collection

In order to collect the quantitative data, the questionnaire was administered twice. After the preparation of the first version of the questionnaire, it was uploaded on google forms and a link was obtained. The researchers shared the link with the participants who gave their consent to participate in the study through the social media widely used in Iran (WhatsApp and Telegram). In the first administration of the questionnaire, the link was shared with 307 participants and 250 questionnaires returned. After primary factor analysis and item reduction and modification, the modified questionnaire was administered again, and 231 questionnaires were returned. The researcher was available to the participants during the administration, and they were able to ask their questions and ask for clarification online.

3.2.3 Procedure

After the compilation of the items and before taking the statistical measures, following Dörnyei (2003), the written items were shared with three domain experts in order to judge the redundancy, language clarity, face validity, and content validity of the items and to give their suggestions of potential items. The opinions of the experts were used to modify and prepare the final draft of the questionnaire. This version was then administered to 35 potential participants in order to check for reliability and piloting.

Once the reliability was ensured, the questionnaire was administered to 250 participants to establish the construct validity of the questionnaire. The aim of the construct validation is to gather evidence that performance on a particular assessment tool “is consistent with predictions that we make on the basis of a theory of abilities or constructs” (Bachman, 2001, p. 255). In order to do so, the present study used factor analysis, which is a set of statistical techniques used to detect and confirm latent factor structure underlying a construct (Thompson, 2004).

Two levels of factor analysis, namely exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used for this purpose. First, EFA was run using SPSS as a preliminary measure to detect the dimensions of the questionnaire. Next, CFA was used through AMOS (Analysis of Moment Structures) to test the hypothesized model and confirm it in order to make sure that the identified factors can account for the variation in the data.

4. Results

4.1 Reliability

Before establishing the construct validity, the internal consistency of the questionnaire was measured through the estimation of Cronbach's alpha. The computation was based on the data provided by the pilot administration of the questionnaire with 35 participants. Cronbach's alpha for the whole instrument was indicated .91 which shows a very high internal consistency index. In line with Dörnyei and Taghuchi (2009) the measures above .60 were recognized as acceptable for the reliability index.

Table 2
Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.92	.92	74

After exploratory factor analysis and removal of 18 items, the reliability of the final questionnaire measured through Cronbach's alpha was calculated as 0.88 and the reliability of the factors were calculated as indicated in Table 3.

Table 3
Reliability Statistics for the Revised Questionnaire

Variable	Cronbach's alpha
Factor 1	0.91
Factor 2	0.83

Variable	Cronbach's alpha
Factor 3	0.79
Factor 4	0.81
Total	0.88

4.1. Exploratory Factor Analysis

In order to identify the underlying components of the questionnaire, exploratory factor analysis was run. EFA is used to reveal the factorability of an instrument without having a prior hypothesis with regard to the patterns and components (Pallant, 2011). The data was obtained by administering the questionnaire to 250 participants and the analysis was conducted through SPSS.

The Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were used to ensure the factorability of the data. The KMO measure of sampling adequacy obtained for this set of items was 0.915, indicating that the present set of data is eligible for a factor analysis. If the minimum KMO level of 0.5 (or 0.6 according to Tabachnick, et al., 2007) is not met, factor analysis is not a good idea. However, a minimum value of KMO for a good factor analysis cannot be run on the data. Another statistical measure used to assess the factorability of the data is Bartlett's test of sphericity that needs to be significant ($p < .05$). In this study the Bartlett's test is significant ($p = .001$), therefore factor analysis is appropriate.

Once the eligibility of the instrument for factor analysis was established, EFA tests were run to identify the number of factors. The results of EFA revealed 22 components with Eigenvalues more than 1.00 which explained 82% of the total variation in the data. As Table 4 shows, the first 4 components explained a total of 52 percent of variation in the data. A four-factor structure is also discernible in the scree plot of the eigenvalues and components. Based on the findings of the qualitative phase of the study and themes of the items, it can be argued that the four factors correspond to the four components of teachers' perceptions of professional development including PD activities, PD needs, PD benefits and PD barriers.

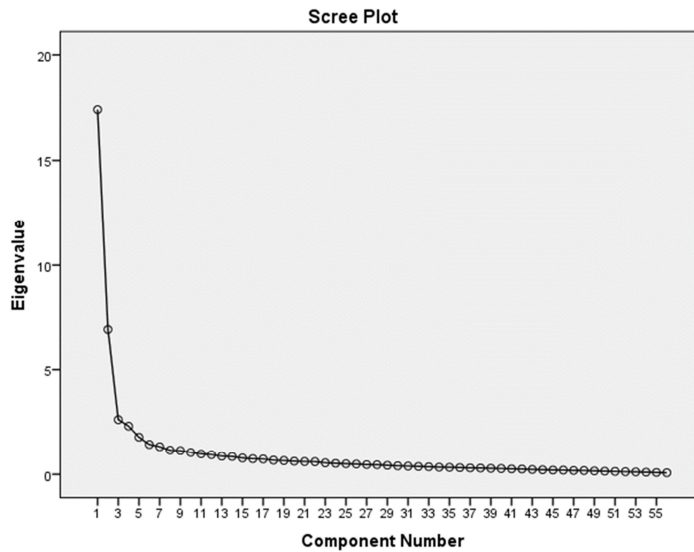
Table 4
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	17.411	31.091	31.091	17.411	31.091	31.091
2	6.950	12.411	43.502	6.950	12.411	43.502
3	2.626	4.689	48.191	2.626	4.689	48.191
4	2.313	4.131	52.322	2.313	4.131	52.322
5	1.785	3.188	55.511			
6	1.441	2.573	58.084			
7	1.333	2.380	60.464			
8	1.162	2.075	62.539			
9	1.142	2.039	64.578			
10	1.053	1.880	66.458			
11	.980	1.750	68.208			
12	.942	1.682	69.890			
13	.868	1.549	71.439			
14	.851	1.519	72.959			
15	.779	1.391	74.350			
16	.745	1.330	75.680			
17	.731	1.306	76.986			
18	.677	1.209	78.195			
19	.656	1.171	79.366			
20	.625	1.117	80.483			
21	.608	1.086	81.569			
22	.601	1.073	82.642			

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Figure 1
Scree Plot of Eigenvalues and Components



Extraction of the items using Principal Component Analysis was used to identify the loadings of the single items on each one of the identified factors. The results revealed, with items loading threshold of 0.3, 18 items did not load on any of the components. With experts' opinions, these items were discarded from the final version of the questionnaire. As for the items with cross-loadings on more than one dimension, after consultation with domain experts, the researchers decided to retain the items on the factors with higher loadings. The revised questionnaire containing the 56 items can be found in the appendix of this paper.

The final version of the questionnaire was administered among the participants of the study and after checking reliability indices, factor analysis was run again. The 4-factor structure was identified again in EFA and principal component analysis was run with the data to verify item loadings once again. The findings of the analysis are shown in the Table 5. The table reveals that items measuring teachers' perceptions of PD activities, PD benefits, PD needs and PD barriers have satisfactory loadings on the dimensions. Table 6 shows the correlation between the components.

Table 5
Results of Principal Component Analysis

Item	Pattern Matrix ^a			
	1	2	3	4
21- Benefit 8	.792			
13- Benefit 1	.768			
15- Benefit 3	.756			
22- Benefit 9	.749			
30- Benefit 18	.317			-.437
16- Benefit 4	.735			
18- Benefit 6	.732			
23- Benefit 10	.730			
25- Benefit 12	.729			
14- Benefit 2	.723			
24- Benefit 11	.722			
26- Benefit 13				
	.682			
28- Benefit 15	.662			
27- Benefit 14	.645			
17- Benefit 5	.589	.322		
20- Benefit 8	.474			
56- Barrier	-.380		.388	
29- Benefit 17	.379	.364		
19- Benefit 7	.575			
7- Activity 7		.628		
6- Activity 6		.617		
9- Activity 9		.596		
1- Activity 1		.573		
3- Activity 3		.561		

5- Activity 5		.556		
8- Activity 8		.554		
4- Activity 4		.531		
12- Activity 12		.527		
10- Activity 10	.449	.503		
11- Activity 11		.463		
2- Activity 2		.428		-.373
50- Barrier 10			.742	
53- Barrier 13			.710	
49- Barrier 9			.705	
46- Barrier 6			.700	
52- Barrier 12			.687	
51- Barrier 11	.396		.682	
45- Barrier 5			.644	
44- Barrier 4			.626	
47- Barrier 7	-.320		.594	
48- Barrier 8.			.590	
42- Barrier 2			.498	
43- Barrier 3	-.305		.464	
41- Barrier 1			.453	
54- Barrier 14	-.331		.447	
55- Barrier 15.	-.314		.436	
36- Need 6				.697
40- Need 10				.673
32- Need 2	.365			.621
35- Need 5	.427			.452
33- Need 3				.448
36- Need 6				.697
40- Need 10				.673
32- Need 2	.325			.621
37- Need 7				.452
38- Need 8				.448
31- Need 1				.352

Extraction Method: Principal Component Analysis.
 Rotation Method: Oblimin with Kaiser Normalization.
 a. Rotation converged in 21 iterations.

Table 6
Component Correlation Matrix

Component Correlation Matrix				
Component	1	2	3	4
1	1.000			
2	.146	1.000		
3	-.356	.140	1.000	
4	-.262	-.162	.050	1.000

4.2 Confirmatory Factor Analysis

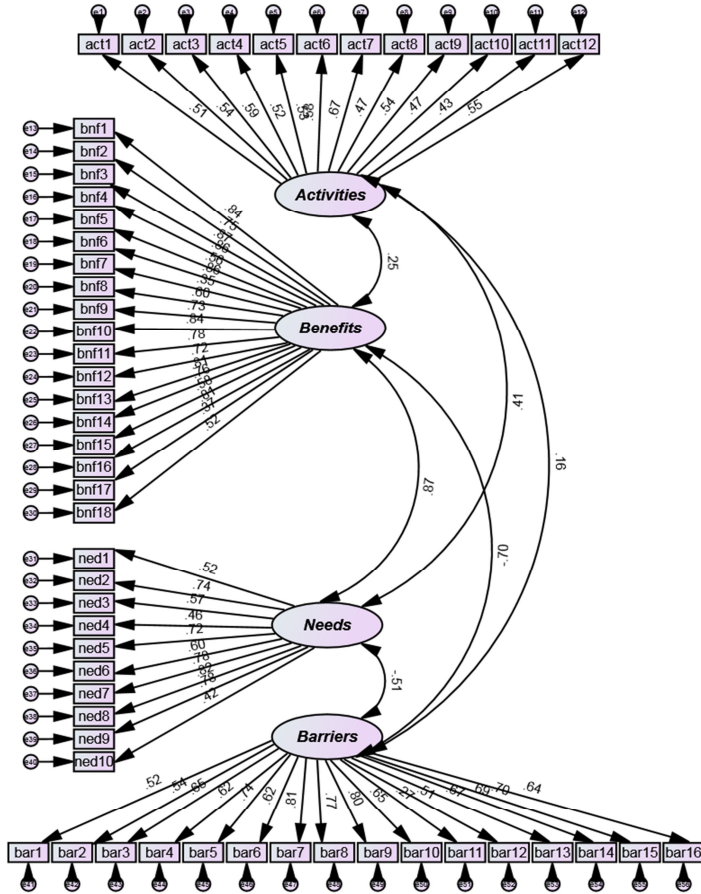
In order to verify and confirm the 4-factor model of EFL teachers' perceptions of professional development, CFA was run using AMOS software. The goal of CFA was to find out if the 4-dimension model fits the empirical data and the extent to which it can account for the variation in the data. Once the model was drawn (figure 2) and the parameters were set, the tests were run to find out the fitness of the model. The strength of the relationship among the variables is shown via the Coefficients on the paths from each latent factor to other factors or observable variables. The factor loadings and the covariance among the four factors were all statistically significant at $\alpha=0.01$ ($p \leq 0.01$).

The calculated fitness indices are presented in Table 7. The indices revealed a satisfactory and good model fit, confirming the 4-factor structure of the 'EFL Teachers' Perceptions of Professional Development Questionnaire' (EFL TPPDQ). The recommended threshold values of these indices reported in the literature (Arbuckle, 2009) were used as points of reference for the obtained values. Five indices that are commonly used for reporting the results of CFA including CMIN/df (Chi-square/ degree of freedom), GFI (Goodness of Fit Index) CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), RMSEA (Root Mean Square Error of Approximation) all reveal levels above the thresholds. Inspecting the values of the indices shows a significantly fit model with CMIN/df value of 2.552, GFI value of 0.988, CFI value of 0.978, TLI value of 0.952 and RMSEA level = 0.085.

Table 7
Fitness Indices

Index	Value	Threshold level	Goodness of Fit
CMIN/df	2.552	$1 < > 3$	Accepted
AGFI	.973	AGFI>0/9	Accepted
PMR	.003	RMR>0/05	Accepted
NNFI (TLI)	.952	NNFI>0/9	Accepted
NFI	0.912	NFI>0/9	Accepted
CFI	0.978	CFI>0/9	Accepted
RFI	0.995	RFI>0/9	Accepted
IFI	0.921	IFI>0/9	Accepted
RMSEA	0.085	RMSEA<0/1	Accepted
GFI	0.988	GFI>0/9	Accepted
PNFI	0.587	>0.05	Accepted
HOELTER	296	>200	Accepted

Figure 2
Final Model



5. Discussion

The aim of the present study was to construct a comprehensive model of EFL teachers' perceptions of professional development in Iran through analyzing the existing models in the literature and combining them with the perspectives of EFL teachers and teaching experts in different educational contexts in Iran. The significance of teachers' perceptions and expectations of PD initiatives has recently come to the focus of teacher education and development studies and various models have been offered for this construct (Torff et al., 2005). The review of the existing instruments was the point of departure for the current study, and our initial review

revealed that the previous studies have dealt with teachers' perceptions of the effectiveness of PD activities or the required PD activities, teachers' perceived PD needs, benefits, barriers, attitudes, motivations, and the experiences (Al-Lamki, 2009; Avidov-Ungar, 2016; Badri et al., 2016; Cirocki & Farrell, 2019; Komba & Nkumbi, 2008; Soodmand Afshar & Ghasemi, 2018).

In the subsequent qualitative and quantitative phases of the study and through consultation with domain experts, the researchers sifted through the variables that need to be included in a model and questionnaire of Iranian EFL teachers' perceptions of PD. Combining the findings of the interviews and comparisons with the literature, the researchers identified teachers' perceptions of PD activities, PD benefits, PD needs and PD barriers as the components that need to be included in the questionnaire. A distinction was made between the variables that measure teachers' willingness, interest or motivations to take part in PD activities as well as teachers' previous experiences of the past PD sessions that they have attended. Though teachers' perceptions of the PD activities, needs, benefits and barriers may be related to their willingness and motivations to engage in PD and their experiences of PD, the latter could be defined and studied as separate constructs in the future studies (Hartono, 2016). On a theoretical level, it can be argued that perceptions or attitudes towards a certain phenomenon cannot be taken synonymously with the experiences of the phenomenon (Ajzen, 2012; Pickens, 2005). Therefore, PD inclination/averseness (Avidov-Ungar, 2016), PD motivation and PD experiences that were identified in review of the literature were discarded from the questionnaire development (Soodmand Afshar & Ghasemi, 2018).

The aim of the present study was to provide a theoretical basis for the Iranian EFL teachers' perceptions of PD activities by identifying its components across three different teaching contexts. In doing so, the focus of the study was hearing out the voices of Iranian teachers and being able to view the professional development activities and continuous professional development of Iranian EFL teachers through their perspectives. Therefore, PD perception was recognized and developed as a separate construct including teachers' perceptions of PD activities, PD benefits, PD needs and PD barriers. Teachers' actual participation in the activities and its frequency or quantity of their engagement in previous PD initiatives was not measured by this questionnaire as they are factual data that is different in nature from attitudinal data (Ajzen, 2012; Susuwele & Banda, 2005). While teachers' subjective understanding of PD might be a precursor to their participation and

engagement (Christensen & Turner, 2014; Cowell et al., 2014; Hortano, 2016), in order to delineate the construct of PD perception it was necessary to be aware of the distinction. Data on teachers' participation in the PD initiatives can be obtained from the authorities, observation or elicited from the teachers' self-report. However, this construct is not necessarily a subsection of teachers' perception of PD. In this sense, the present study tries to delineate PD perception as a construct in its own in order to avoid confusion. This runs counter to the approach taken by the studies that have put teacher perception and participation in PD in the same category (Askari, 2017, Soodmand Afshar & Ghasemi, 2018).

The component of PD activities identified in this study captures EFL teachers' perceptions of the effectiveness and usefulness of different PD activities, rather than the extent to which the teachers engage or participate in the activities. Though it was challenging to find the consensus between the EFL teachers in different sectors and some items had to be removed, the remaining 12 items subsumed under this subsection reflect the commonalities in the EFL teachers' perceptions of the effectiveness of PD activities in their teaching context in Iran (see Appendix). Though this list of PD activities is not extensive, it purports to offer a valid measure of Iranian EFL teachers' perceptions of PD activities. The items compiled to measure this component are in line with previous studies and developed questionnaires in Iran (Askari, 2015, Soodmand Afshar & Ghasemi, 2018) and elsewhere (Badri et al., 2015), though there are also singularities and modifications in the items. The major difference lies in the fact that, as mentioned earlier, the focus of the component is not the activities that the teachers have attended or the definitions of PD, but the emphasis is on the perception of the teachers of the effectiveness of certain activities and PD activities in general.

Perception of support from the authorities and the stakeholders through different means was identified as another potential dimension of teachers' perceptions of PD, both in the literature and in the interviews (Al-Lamki, 2009; Badri et al., 2016). Teachers' and teacher educators' complaints about the lack of support for PD led the researchers to conclude that perception of lack of support on the part of the authorities can be grouped with the perceived barriers in one dimension. Once the items were adopted and designed for this dimension, the process of validation verified the inclusion of lack of PD support with the barriers. This means that perception of better PD support can facilitate engagement in PD and lead to perception of lower barriers (Al-Lamki, 2009; Nasser et al., 2015). On the other

hand, perception of lack of support by the authorities, policymakers and headteachers or principals can act as an obstacle on the way of teachers' PD. This component sums up the contextual factors that the teachers view as detrimental to their engagement in PD activities. While some of these contextual factors might be common with other contexts, the items listed are particularly valid in the case of the Iranian EFL teachers.

The teachers' perceptions of PD benefits was also identified as a component of EFL teachers' perception of PD. The items loading on this component enquire the teachers' perceptions of the aspects of their professional practice that can benefit from engaging in professional development in their teaching context. It also reveals the extent to which teachers believe PD to be beneficial to their practice in general. Previous studies have highlighted the significance of teachers' positive attitudes towards the efficiency and significance of PD. The qualitative studies such as Avidov-Ungar (2016), Nasser et al. (2015), and Powel and Bodur (2018) point to the professional and personal positive outcomes that the teachers believe they yield from PD. While Avidov-Ungar (2016) introduces PD motivation and PD aspiration as teachers' positive attitudes towards PD benefits, in the current study we keep PD motivation as a separate construct. Regarding PD aspirations, Avidov-Ungar (2016) differentiates between horizontal and vertical aspirations which refer to teachers' aims to progress in their profession to gain better standing as teachers or to promote to higher levels. Both have been identified in the current study as perceived benefits of PD by the teachers. Badri et al. (2016) also recognize PD benefits as one of the major components of their questionnaire outlining more perceived benefits by teachers. The present study expanded the component even further and finally, 20 items were retained after the statistical procedure to measure this component.

Teachers' perceptions of their PD needs were another dimension of the questionnaire. It is argued that the teachers' PD needs must be recognized from their perspectives and in a bottom-up manner rather than a top-down dictation of the agenda by the educational policymakers (Brody & Hadar, 2015; Darling-Hammond et al., 2017; Hyler & Gardner 2017). The investigation of the areas in which the EFL teachers feel the need for professional development and the amount of need they are feeling in general is the aim of this component of the questionnaire. This perceived need is indeed subjective and through the eyes of the teachers, and it might not reflect all the real PD needs of teachers. However, having a quantitative understanding of the perceived PD needs of the teachers can help the PD developers

and policymakers to have a more comprehensive grasp of teachers' views towards PD. This would make them able to take the teachers' views and expectations into account in designing the PD initiatives and build on their previous experiences and expectations. This finding is in line with the emphasis on teacher-centered PD and the call for recognizing teachers' perspectives. Louws et al. (2017) explain this issue in PD stating that "teacher learning experiences are not geared toward the teacher's years of teaching experience, and they are often not designed to build on a teacher's previous experiences" (p. 488). Since the improvement and progress in teachers' performance and practice start from their own efforts, it seems logical that PD initiatives also start from the teacher's perceived professional needs (Noonan, 2019).

The aim of the development of the questionnaire in general was to facilitate measuring and quantifying EFL teachers' perceptions of PD. The statistical procedures applied helped in modifying the questionnaire and reaching a more valid and reliable instrument. Exploratory Factor Analysis revealed a 4-dimension structure and the items in each dimension that did not load on the identified factors were discarded in the Principal Component Analysis. Finally, Confirmatory Factor Analysis verified the fitness of the designed model and provided significant evidence for validity of the questionnaire. However, it should be noted that the evidence for validity in this case is provided for the EFL context in Iran, and in different contexts and for different audience, further validation steps need to be taken. As it is argued (Kane, 2006; Messick, 1989; Mislevy, 2009) validity is not an inherent feature of an instrument and it depends on the purpose and the inferences that are to be drawn from a test.

6. Conclusion

Teachers are the main agents of education and their professional learning and development has a direct influence on student achievement and the efficiency of the educational systems (Gusky, 2000). However, the effectiveness of PD sessions and initiatives and teachers' active participation and uptake is contested. In order to understand teachers' engagement in PD and their motivation for professional learning and development, it is first necessary to have a clear understanding of teachers' perceptions and perspectives of PD. The current study aims to delve into Iranian EFL teachers' perceptions of PD by developing a model and questionnaire of teachers' perceptions of PD by focusing only on teachers' perceptions rather than

experiences, motivations or aspirations to partake in professional learning.

The constructed model and questionnaire can have theoretical and practical contributions to teacher development and education. On theoretical level, the present study provides further elaboration on the construct of EFL teachers' perceptions of PD by offering a 4-dimension model and a questionnaire of 56 items. Future studies can build on the developed questionnaire and the results of the present study shed more light on teachers' perceptions of PD in Iran and other contexts among EFL and other subject teachers. The present study aimed at delineating the construct of EFL teachers' perceptions of PD by focusing only on teachers' subjective views and understandings rather than their previous experiences of PD participation. On a theoretical level, while teachers' current perceptions of PD, past experiences of participation and future aspirations for PD might be well-connected, in order to be able to study and measure each and understand the mechanisms of interconnection between them, it is necessary to beware of the differences and avoid putting all of them into one category. By doing so, the present study aimed to contribute to the theoretical discussion on teachers' perception of PD, focusing on Iranian EFL teaching context.

A better grasp of teachers' understandings of PD can aid teacher educators and policymakers in designing and implementing PD initiative paths with a bottom-up approach, considering the views of teachers (Torff & Sessions, 2009). Maximizing teachers' engagement and learning and efficiency of PD efforts can be an immediate outcome of further attention to teachers' perceptions of PD (Day 2004; Harper-hill, 2022; Kuijpers et al., 2010). Understanding the teachers' perceptions of the effectiveness of different PD activities, their PD needs, PD benefits and barriers to PD can lead to raising awareness among teachers regarding PD (Qablan et al., 2015). Teachers can be informed further about the range and effectiveness of PD activities, the necessity and the need for PD, benefits of PD and identifying and dealing with barriers in their teaching and professional learning context. Once the teachers' perspectives are identified, measures can be taken to influence the undesirable perceptions and change them by providing sufficient information about PD. The present study provides a tool for collecting data on EFL teachers' perceptions of PD at a large scale and the results of the implementation of the questionnaire in different contexts can be used to design training courses and initiatives at larger scope with the aim of raising the EFL teachers' awareness about PD.

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Appendix A

EFL Teachers' Perceptions of Professional Development Questionnaire

Dear colleague,

This questionnaire is a part of a study into Iranian EFL teachers' perceptions of professional development. We sincerely appreciate your careful completion of the questionnaire as it will contribute to the collection of accurate data about the current status of EFL teacher professional development in Iran. Your responses will be kept anonymous and confidential, and will only be used for the purpose of academic research. Thank you for your cooperation.

Personal Information

- Context of Teaching

- High school
- Private institute
- University

- Years of teaching experience:

- 0-5
- 6-10
- 11 or more

- Gender:

- Male
- Female

- Education:

- BA/ BSc
- MA/ MSc
- PhD

- Major:

- TEFL (teaching)

- Literature
 Translation
 Other

Questionnaire

Listed below are statements about what EFL teachers believe about professional development activities, benefits, needs and barriers to their professional development in Iran. After reading the statements, please check the answer that is closest to your personal opinion, using the following scale. Please note that there are no right or wrong answers to the statements in the inventory.

1= Strongly disagree, 2= Disagree, 3= No idea, 4= Agree, 5= Strongly agree

N	Questions	1	2	3	4	5
	PD activities					
1	I think interacting with colleagues and the teaching community and listening to their experiences and getting feedback from professional teachers can make me a better teacher.					
2	I think participating in international training courses (TESOL, CELTA, DELTA, ...) can make me a better teacher.					
3	I think participating in online/in person short teacher training workshops can make me a better teacher.					
4	I think reflecting on feedback from the students and monitoring their learning can make me a better teacher.					
5	I think improving my general English through self-study/classes can make me a better teacher.					
6	I think conducting action research or small-scale research in my classes can make me a better teacher.					
7	I think participating in training courses about using technology in teaching can make me a better teacher.					
8	I think self-study of books, journals, sites, etc. related to language teaching and learning can make me a better teacher.					
9	I think graduate studies and conducting research in university can make me a better teacher.					
10	I think participating in in-service training courses of my high school/ institute/university can make me a better teacher.					
11	I think participating in PD activities embedded in my teaching context can make me a better teacher.					
12	I think reflective teaching and understanding my weak and strong points can make me a better teacher.					
	PD benefits					
13	Professional development and learning can help me in improving my salary.					

14	Professional development and learning can help me in learning to connect with the EFL teaching community and finding out about how my colleagues teach English locally and internationally.				
15	Professional development and learning can help me in class management and handling student discipline issues.				
16	Professional development and learning can help me in improving my relationship with the students.				
17	Professional development and learning can help me in making me feel rewarded and fulfilled.				
18	Professional development and learning can help me in getting promoted to higher positions.				
19	Professional development and learning can help me in increasing student learning and achievement.				
20	Professional development and learning can help me in making me more successful in planning the lessons and delivering them.				
21	Professional development and learning can help me in dealing with different teaching contexts and students from various backgrounds.				
22	Professional development and learning can help me in improving my job satisfaction.				
23	Professional development and learning can help me in enhancing my knowledge and practice of assessment and testing.				
24	Professional development and learning can help me in connecting theory to practice.				
25	Professional development and learning can help me in improving my confidence as a teacher.				
26	Professional development and learning can help me in preparing myself for dealing with individual differences of students.				
27	Professional development and learning can help me in updating my knowledge of L2 learning and SLA research				
28	Professional development and learning can help me in improving my knowledge of pedagogy and methodology.				
29	Professional development and learning can help me in giving me a better recognition among colleagues and the community of EFL teachers.				
	PD needs				
30	Through professional development activities, I need to update my knowledge of L2 learning and SLA research				
31	Through professional development activities, I need to improve my digital literacy and computer knowledge.				
32	Through professional development activities, I need to enhance my knowledge of pedagogy and teaching methodology.				
33	Through professional development activities, I need to enhance my ability in developing materials (such as multimedia material) and adapting the available material for my class.				
34	Through professional development activities, I need to enhance my intercultural awareness for teaching in various contexts and prepare the students for communication in multicultural settings.				
35	Through professional development activities, I need to learn how to guide and counsel the students about their academic and professional future.				
36	Through professional development activities, I need to receive mentoring				

	and coaching from experienced head teachers and supervisors.					
37	Through professional development activities, I need to learn about class management and student discipline.					
38	Through professional development activities, I need to enhance my testing and assessment knowledge					
39	Through professional development activities, I need to learn how to connect with the community of EFL teachers					
40	Through professional development activities, I need to improve my general English proficiency.					
	PD barriers					
41	The PD activities offered in my teaching context are not relevant to my teaching practice and needs.					
42	It is too expensive to participate in PD activities.					
43	I am too busy and there is no time for participation in PD activities.					
44	PD activities are not engaging, interesting and interactive.					
45	PD activities are poorly presented and offered.					
46	PD activities are disorganized and untimely.					
47	PD activities are poorly budgeted and the facilities for providing these activities are not enough.					
48	There are not enough financial incentives for participation in PD activities.					
49	Teacher PD is a formality rather than an organizational priority.					
50	Principals or supervisors in my teaching context do not value and support PD, so they do not encourage my participation in PD activities.					
51	There are few expert trainers or supervisors to deliver PD activities.					
52	My colleagues don't have a positive view towards PD activities and do not support my participation.					
53	The content of PD activities is dictated by authorities rather than by analysis of teachers' needs.					
54	There is not a huge difference among teachers who participate in PD activities and the ones who don't in terms of salary or recognition					
55	The certificate that they give you for participating in PD activities is not internationally valid.					
56	Teachers are not informed about the upcoming courses, workshops and webinars.					