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Research Paper

## Reconceptualizing the Main Factors of Reflection-for-Action in an Iranian EFL Context

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### Abstract

Reflection is a key component of teacher development by which teachers can gain an understanding of the teaching knowledge, connect theory to practice and develop teaching skills. This study aimed to investigate the underlying structure of the items that make up 'reflection-for-action' in an Iranian EFL context. To present a framework for research and highlight the components of reflection-for-action, this study developed and validated a teacher reflection-for-action questionnaire. To this end, ten components were identified after undertaking a comprehensive review of the literature and conducting interviews with domain experts on Reflection. Then a draft version of the Reflection questionnaire, consisting of 49 items, was pilot tested with 200 teacher evaluators, who were working for various English language institutes and universities in Iran. The results, using Exploratory Factor Analysis (EFA), led to a 38-item questionnaire with strong estimates of reliability and validity. The results also demonstrated that the questionnaire consisted of a seven-factor structure of collaboration, motivation, perception, experience, academic qualification, professional development, and efficacy. Consequently, Confirmatory Factor Analysis (CFA) was carried out with another 200 Iranian EFL teachers to check the fitness of the proposed model. The result of CFA indicated that the model enjoyed a satisfactory level of goodness of fit, showing that the seven-factor were not the result of random variance in the learners' responses. Finally, statistical results are discussed and implications are provided.

**Keywords:** *Confirmatory Factor Analysis, Exploratory Factor analysis, Reflection-for-action (Reflection-in-action and Reflection-on-action).*

### بازنگری مفهومی تامل برای عمل در محیط یادگیری زبان انگلیسی به عنوان زبان خارجی در ایران

تامل یکی از مولفه های کلیدی در رشد معلم ها است که با توجه به آن می توانند به درکی از دانش تدریس، ارتباط تئوری و عمل و توسعه مهارت های تدریس برسند. هدف از انجام این تحقیق بررسی ساختار اساسی مواردی است که تشکیل دهنده "تامل برای عمل" در محیط یادگیری زبان انگلیسی به عنوان زبان خارجی در ایران است. به منظور ارائه چارچوب برای انجام تحقیق و مشخص کردن مولفه های "تامل برای عمل"، این تحقیق به توسعه و اعتبارسنجی یک پرسشنامه در این رابطه پرداخته است. در این راستا، پس از مطالعه جامع از پیشینه تحقیق و انجام مصاحبه با متخصصان این حوزه، ده مولفه شناسایی گردید. سپس، نسخه اولیه پرسشنامه که شامل 49 گویه بود توسط 200 معلم که در موسسات آموزش زبان انگلیسی و دانشگاه های متعدد در ایران مشغول به کار بودند، مورد ارزیابی آزمایشی قرار گرفت. نتیجه به دست آمده بر اساس تحلیل عامل اکتشافی مورد بررسی قرار گرفت و منجر به ایجاد یک پرسشنامه 38 گویه ای با قابلیت اطمینان و اعتبار قوی شد. نتایج همچنین نشان داد که پرسشنامه دارای یک ساختار هفت عاملی شامل همکاری، انگیزش، ادراک، تجربه، صلاحیت دانشگاهی، پیشرفت حرفه ای و اثربخشی می باشد. در نتیجه، تحلیل عامل تاییدی با 200 معلم ایرانی دیگر برای بررسی تناسب مدل پیشنهادی انجام شد. نتیجه تحلیل عامل تاییدی نیز حاکی از آن است که این مدل دارای سطح رضایت بخشی از تناسب است که نشان می دهد این هفت عامل ناشی از واریانس تصادفی در پاسخ های دانشجویان نبوده است. در نهایت، نتایج آماری مورد بحث قرار گرفتند و مفاهیم و کاربردهای تحقیق ارائه گردید. **واژگان کلیدی:** تحلیل عاملی تاییدی، تحلیل عاملی اکتشافی، تامل برای عمل (تامل در عمل و تامل بر عمل).

## Introduction

It is commonly acknowledged that teachers have a crucial role to play in the betterment of the education system. They are the principal players who can make transformations happen Mulford (2003). Thus, due to their vital role, teachers must be supported and well-equipped with learning opportunities to hone their skills and become qualified enough to teach as efficiently as possible (Wright, Hom, & Sanders, 1997). Moreover, language teachers should not see themselves as passive agents in the field. Rather, they should be involved deeply in the process, and the only way to do this is taking time to think and reflect on their practices to foster more effective learning in their students (Pacheco, 2005).

The importance of reflection in teaching and learning lies in encouraging one to view problems from different perspectives (Brookfield, 2004). In fact, teachers need to develop the skills for reflective practice, research on the job and working in diverse environments (Duthilleul, 2005). It is vital that teachers remember that they do not teach in a vacuum. For this reason, constant reflection is required so that teachers can adequately respond to certain classroom situations, provide good solutions to specific problems and make adjustments so that the teacher's delivery is more successful (Akbari, 2008). Even more, Cornford (2002) argued, Reflective practice is the ability to reflect on an action so as to engage in a process of continuous learning.

A key rationale for reflective practice is that experience alone does not necessarily lead to learning; deliberate reflection on experience is essential (Mathew, 2017). Regardless of nuance, through reflection, the teacher better understands and extends his/her professional activity, and that reflecting on teaching problems will lead to new insights for practice (Mathew, 2017). Reflection is a key component of teacher development by which teachers can gain an understanding of the teaching knowledge, connect theory to practice, develop teaching skills, and move beyond the level of automatic responses to classroom situations towards a higher level of their teaching practices (Richards, 1991). Additionally, because of the uniqueness of different teaching situations, and various approaches to critical reflection, teachers may have different behavioral, cognitive, and affective feedback during their reflection process and the contents of their reflections can be quite different (Huang, 2008).

In general terms, and drawing on from the content analysis, involving teachers in professional development programs focused on reflective teaching gives them benefits to change their perception and beliefs towards English language education that will finally reveal a whole transformation of the teacher not only within the classroom but also will help them raise their self-esteem, confidence, and their competence to create new approaches to education (Fathi & Behzadpour, 2011).

## Literature Review

The origin of reflective practice in the literature traces back to Dewey (1933) and Schön (1983). Dewey makes a distinction between a reflective and a routine action. A routine action, according to Dewey (1933), is a behavior that is guided impulsively, traditionally, and authoritatively. On the other hand, reflection is an “active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends” (p. 6). As Dewey (1933) claimed, this view will be achieved by personal adjustment like ‘open mindedness’, ‘wholeheartedness’, and ‘responsibility’. According to Zeichner (2007), these three characteristics are prerequisites for reflective action from Dewey's stand point. Built on Dewey's ideas about reflection, Schön, in the 1980s, introduced the two terms of reflection-on-action and reflection-in-action. Reflection-on-action is the result of intentional and analytical thinking about a teaching event after it occurs (Schön,

1983). Reflection-in-action also means the exploration of professional beliefs, practices and experiences during teaching. Briefly, how a person is thinking and acting as a professional (Bulman, & Schutz, 2004). Reflective practices empower teachers to become successful decision makers who take responsibility for their actions. Reflective practices led teachers to meet the learning needs of students in a better way (Zeichner, 2013). The practicum course offers opportunities to student teachers to reflect upon their professional actions through videotaping, micro-teaching assignments, reflective learning journals, peer's feedback and student's feedback (Erginel, 2006).

Reflection in pedagogy still has a limited theoretical basis, which is based largely on historical precedent and the more recent work of Schön (1987). In addition to the lack of attention to different contexts and approaches of the issue at stake, the literature on teachers' reflections regarding different aspects of teaching and learning process in second language contexts is not very well-documented either.

Reflective practice is a complex construct which has been defined in various ways in the literature. For example, Boud, Keogh and Walker (1985), defined reflective practice as a generic term that includes intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciation, or Jasper (2013) associated reflective teaching practice with lifelong learning resulting in the development of autonomous, qualified and self-directed professionals and from Mathew's (2017) arguments, it is possible to say that reflective teaching as a critical examination of teachers' performances is mainly determined by the way they self-evaluate because the self-evaluation process requires a deep understanding of how language teachers teach and try to find reasons why they teach in certain ways.

Farrell (2013), further, elaborates on attributes of reflective teachers by maintaining that reflective teachers carefully consider various aspects of their classes, including what they are doing, why they are doing this, and what will be the consequences of their conduct. By reflecting on these questions, as Salmani-Nodoushan (2006) also maintains, reflective teachers will be able to initiate necessary changes in their teaching and subsequently to take high control of their classes. In another aspect, Núñez and Téllez (2015) concluded that reflection raises teachers' awareness of personal and professional growth by enhancing their discipline knowledge and pedagogical practices. What Núñez and Téllez (2015) suggested is that the process of reflection helps not only to reinforce the English language instruction in the classroom but also teachers' personal and professional life. In this process of reflection teachers may start creating their own teaching materials and transforming their classroom into possible research projects.

This also holds true in the Iranian context where practitioners and theoreticians hold quite distinct interpretations as to what reflection is and who a reflector might be. In this regard, Soodmand Afshar and Farahani (2014) postulated that Reflective thinking plays a particularly important part in every day's activities. Along with such concern, Akbari (2007) suggests that reflective teaching will make teachers question clichés that they have learned during their formative years and will also enable them to develop more informed practice. Teachers will integrate the knowledge they have gained during pre-service training with their practical experiences and make informed choices based on the situations they find themselves in.

Accordingly, there have been some empirical studies on reflective teaching. In a study, Karimi Allvar (2008) attempted to investigate the relationship between Iranian EFL teachers' teaching styles, sense of efficacy, reflectivity and their students' achievement outcomes. The results showed a high correlation between each pair of variables and revealed that the three teacher characteristics significantly predict students' achievement gains. Similarly, Akbari, Bhezadpour, and Dadvand (2010) examined the effect of EFL teacher's reflection on their

learners' writing achievement. About 100 EFL teachers and their 1000 EFL learners participated in their study. The results of the study revealed that teachers' reflection significantly affected EFL learners' writing achievement. Regarding the role of demographic factors on teachers' reflectivity, findings of the study of Karadag and Sadik (2012) indicated that teachers with higher lengths of service had a higher reflective teaching tendency. However, the results of the study by Odeh, Kurt, and Atamtürk (2010) showed that demographic factors such as gender and experience did not play a significant role in teachers' reflection.

In a more localized setting in Iran, few similar studies have been conducted to document challenges Iranian ELT teachers face in applying reflective teaching principles in their practices (Tajik & Ranjbar, 2018). Therefore, according to Akbari, et al (2010), a comprehensive reflective teachers' training program is needed to sensitize prospective teachers about latest standards of teaching and assessing their own performance as per national and international benchmarks to match the objectives and outcomes consistently and efficiently. This, however, requires a corpus which defines and identifies the elements and components of a reflective atmosphere in an Iranian context, where socio-cultural factors should be taken into account in specifying the components of reflection.

### **Purpose of the Study**

As reflective practice has become an influential factor in teacher professional development, teachers need some techniques to enhance their reflective teaching. In keeping with such views and in line with the literature on definition of reflective teaching, this study sought to shed light on the contents of reflective teaching provided by Iranian EFL teachers. Meanwhile, it made an attempt to reconceptualize reflection-for-action (reflection-in-action and reflection-on-action) in an Iranian EFL context. Consequently, there is a need for appropriate professional development programs for Iranian language teachers that meet real requirements of the constantly changing Iranian educational system. Moreover, there have been no studies about the levels of Iranian English teachers' reflection on their practice and how the variables of qualifications moderate this process. So, this study tries to address this issue and provide a practical definition for reflection-in-action and reflection-on-action and the results of the study would hopefully help Iranian EFL teachers and practitioners to form a set of attitudes towards teaching practices based on horizon of understandings, of the self, of the society and of broader moral purposes.

This study examines the roots of reflection-for-action in theory and practice of foreign language teaching. Theory is generated and validated through the examination of practice by the practitioners rather than being independently applied (Elliott, 1991). The purpose of this study, in other words, is to critically review the components comprising reflection-in/on action and suggest ways that the concept can be customized in an Iranian context. The main goal of the study, however, is to develop a model of reflection-for-action in L2 teaching, that is, one in which teachers collect data about teaching, examine their attitudes, beliefs, assumptions, and teaching practices, and use the information obtained as a basis for critical reflection about teaching. Therefore, the following research question was formulated to achieve the goals of the present study.

**Q.**What is the underlying structure of the items that make up 'reflection-for-action' in an Iranian TEFL context?

### **Method**

#### **Participants**

In the first phase 50 teachers and six experts participated in order to constitute a tentative model which is then distributed to 200 EFL teachers. Teachers and experts are Ph.D. students and professors of different universities (Shiraz, Tehran, Ahvaz, Esfahan, Tabriz) in Iran. In the

second phase, based on the objectives of the study, two hundred teachers (71% males and 29% females) held a B.A. (18%), M.A. (54%) and ph.D. (28%) degree in one of the following majors: TEFL, English Literature or Linguistics with the age range of 20-60 at different English language institutes and universities in Iran, were selected to take part in the study. They all were Persian native speakers and selected based on the participants' availability and their consent to participate in the study, their experience in teaching (at least four years), and their familiarity with reflective practices. Hence, Evaluating published media through Google scholar and communicate directly with the experts whose research was mainly based on the related subject by E-mail or LinkedIn made the process of finding informed experts easier.

## **Instrumentation**

### **Questionnaires and Scales on Reflection-for-Action**

A corpus of well-known available questionnaires and scales on reflection-for-action were checked in order to choose the best items. These include the following:

1- The teacher reflectivity questionnaire proposed by Akbari, Behzadpour and Dadvand (2010), which included 29 items on a 5-point Likert scale with different dimensions of affective, cognitive, metacognitive, practical and critical. And, the Cronbach alpha reliability of the questionnaire was reported to be 0.91.

2- The Teacher Reflective Practices scale utilized by Tok & Dolapçioğlu (2013), this scale contains 28 items in 6 dimensions which include (1) creating a student-centered environment (2) creating a reflective classroom environment (3) appreciating criticism (4) self-evaluation (5) decision making and (6) openness to professional development, with a reliability coefficient of 0.88.

3- Reflection in Learning proposed by Sobral (2001), which Contains 14 items composed of 7 to 18 words and 7-point response scale with the reliability of 0.84.

4- Reflection Questionnaire by Kember et al. (2000), contains 16 items and four scales such as: habitual action, understanding, reflection and critical reflection with the reliability of 0.62.

5- Groningen Reflection Ability Scale, by Aukes et al. (2007). One-dimensional scale with three relevant aspects of that dimension: Self-reflection, empathetic reflection and reflective communication. Contains 23 items on a 5-point Likert scale with the reliability of 0.83.

And, the sixth one is Self-Reflection and Insight Scale by Grant, Franklin and Lang-ford (2002). Contains 2 scales: self-reflection and insight scale with the reliability of 0.77 (Self-Reflection Scale) and 0.78 (Insight Scale).

These questionnaires were used here for a number of reasons: First, they fit the objectives of the present study. Second, they had been used highly frequently by researchers from different parts of the world. Third, their validity and reliability had been checked several times with different datasets.

Questionnaire design is the process of designing the format and questions in the survey instrument that will be used to collect data about a particular phenomenon. Many researchers want to track changes over time in people's attitudes, opinions and behaviors. To measure change, questions are asked at multiple points in time, and therefore they must be attentive to how opinions or behaviors have been measured in prior surveys. Furthermore, they try to reduce the total amount of measurement error in a questionnaire. In this regard, in designing the layout of this questionnaire (Appendix A), all standard various stages of survey and implementation in formulating instructions, questions, sampling and data collection have been considered carefully. Throughout a questionnaire, items should follow coherently, which usually requires that items on related topics be grouped together. Given the present state of knowledge, seven factors, each, related to the items, were designed to emphasize the clarity of scale point meanings, which let

researcher maximize reliability and validity. Moreover, respondents also express greater satisfaction when more scale points were verbally labeled.

Currently, Akbari et al, (2010) English Language Teaching Reflective Inventory (ELTRI) with 29 items, is the only instrument available to measure teacher reflection in the field of ELT in Iran. Due to the novelty of the instrument, Akbari et al (2010) strongly recommended that further studies be conducted in different contexts to test its relevance and validity. Moreover, because a questionnaire is reliable and valid in one setting, it cannot be assumed this is the case in all settings. In this regard, this newly-designed questionnaire measured validity in various ways, including content validity which was based on the review of the well-educated expert panels on the related field and construct validity which leads to more suitable and related items.

### **Data Collection Procedures**

To start the first phase of this study, a comprehensive review of the related literature pertinent to reflection-for-action was employed to assess the related constructs. This was purposefully done to check any current questionnaires and scales 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 the expert comments or asking a sample from the target population to describe their attitudes and behaviors (Giaino-Ballard & Hyatt, 2012). Accordingly, the researcher not only reviewed the related literature on reflection-for-action but also had a focus group interview with some EFL teachers to gain more information. In this stage, 49 items were generated as the first draft of the questionnaire.

In the second phase, Constructs and sub-constructs were identified to see the trends and frequencies of the data. In fact, the constructs were 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 or questionnaire format, the number of items was specified. After writing the items, repeated items were deleted and the list was reduced from 49 items to 38. After that, the content validity was evaluated.

First and foremost, to evaluate the content validity, six professional field-specific experts in English Language Teaching (ELT) were asked to consider and assess the components and subcomponents of the questionnaire and give their suggestions and comments for each components and subcomponents improvement. The panel of experts included experts in teaching English at the universities of Shiraz, Tabriz, Ahwaz, Tehran, and Isfahan. 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.

Secondly, in order to obtain feedback about the structure of individual items within the questionnaire, check the component make-up of the inventory and make sure of item redundancy, clarity, and readability, a small sample of participants, 200 EFL teachers were invited to participate in a pilot study and have an analytic examination at the instrument. Each pilot participant was sent a link made in Google Forms through social networking websites such as Research Gate and LinkedIn, online applications such as WhatsApp, Telegram, and email. Also, they were asked to send comments about the clarity of directions and length of the questionnaire. 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. Lastly, a 5-point Likert scale ranging from never to always was selected and all the developed items were checked once. This step of the analysis resulted in the sub-components of reflection to be measured and validated in the subsequent phases of the study.

## Results

### Exploratory Factor Analysis

Exploratory factor analysis was conducted in order 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. 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 measured sampling adequacy for each variable in the model and for the complete model (Habibpour & Safari, 2012). The KMO measure of sampling adequacy for the data under study was .87 which was well above the minimum required level of .60 (Tabachnick & Fidell, 2001) and the Bartlett's test of sphericity was significant at  $p < .001$ . As table 1 shows.

**Table 1**

*KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.877
Bartlett's Test of Sphericity	Approx. Chi-Square	1036.450
	Df	45
	Sig.	.000

In addition, to determine the number of factors, Kaiser's criterion, which claims that eigenvalues must be more than 1, was examined. Table 2 shows those components whose eigenvalues were above 1.

**Table 2**

*Total variance explaine*

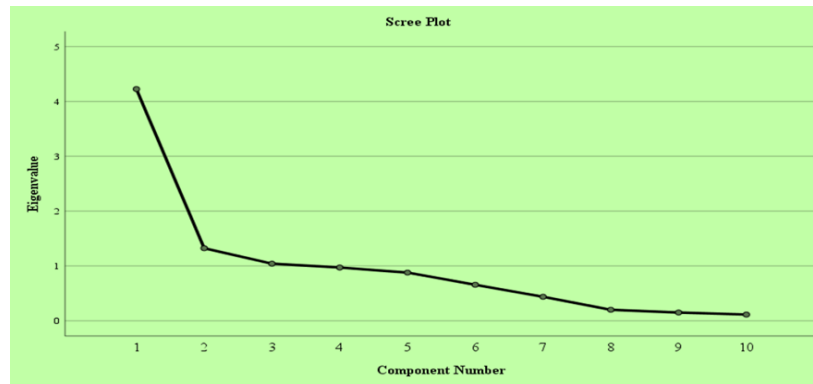
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	%	%	Total	%	%	Total	%	%
1	4.22	42.26	42.26	4.22	42.26	42.26	4.18	41.88	41.88
2	1.32	13.23	55.49	1.32	13.23	55.49	1.27	12.71	54.59
3	1.04	10.41	65.90	1.04	10.41	65.90	1.13	11.31	65.90
4	.972	9.71	75.62						
5	.879	8.78	84.41						
6	.656	6.56	90.97						
7	.438	4.37	95.35						
8	.200	2.00	97.35						
9	.151	1.50	98.86						
10	.113	1.13	81.26						

Extraction Method: Principal Component Analysis

As presented in Table 2, there were 10 components with eigenvalues of more than 1. These components could explain a total of 81.26 percent of the total variance. The first, second, third, fourth, fifth, sixth, seventh, eighth, ninth, and tenth factors could explain nearly 42.26, 13.23, 10.41, 9.71, 8.78, 6.56, 4.37, 2.00, 1.50, and 1.13 of the total variance, respectively. As it is evident, factors 8, 9 and 10 could only account for 2%, 1.50, and 1.13 of the total variance which seemed to be very low. The decision as to the number of factors to be kept was determined by eigenvalues above 1 and inspection of the scree plot. The scree plot is shown in Figure 1.

**Figure 1**

*Scree Plot of the components*



According to Figure 1, there was a clear break after the component 7. To enamine the exact number of factors for further analysis, the Parallel Analysis using MonteCarloPA.exe were run to analyze the data. Table 3 shows the results.

**Table 3**

*Parallel analysis of eigenvalues*

Components	Random Eigenvalue	Obtained Eigenvalues
1	2.37	42.26
2	2.26	13.23
3	2.17	10.41
4	2.15	9.71
5	2.13	8.78
6	2.12	6.56
7	1.92	4.37
8	1.84	2.00
9	1.81	1.50
10	1.75	1.13

Table 3 shows that the criterion was met for components 1 to 7. Thus, it is concluded that based on the low variance that these factors revealed, scree plot, and parallel analysis, it was decided to maintain the seven components for further investigation. The results also indicated that there was a weak correlation among the seven components, as presented in Table 4.

**Table 4**

*Correlation among the seven components*

	1	2	3	4	5	6	7
1							
2							
3							
4							
5							
6							
7							



Collaboration	1.119	.150	.238	-.137	.085	-.292	-.268
Motivation	.150	5.648	-.701	-.463	.097	-2.581	.107
Perception	.238	-.701	4.118	-.727	.262	-1.688	-.053
Experience	.137	-.463	-.727	2.028	-.171	-.195	-.064
Academic Qualification	.085	.097	.262	-.171	1.149	-.445	.034
Professional Development	.292	-2.581	-1.688	-.195	-.445	6.340	-.055
Efficacy	.268	.107	-.053	-.064	.034	-.055	1.132

As presented in Table 4, the correlations among factors were very low, which were satisfactory for the purpose of the study.

### Confirmatory Factor Analysis

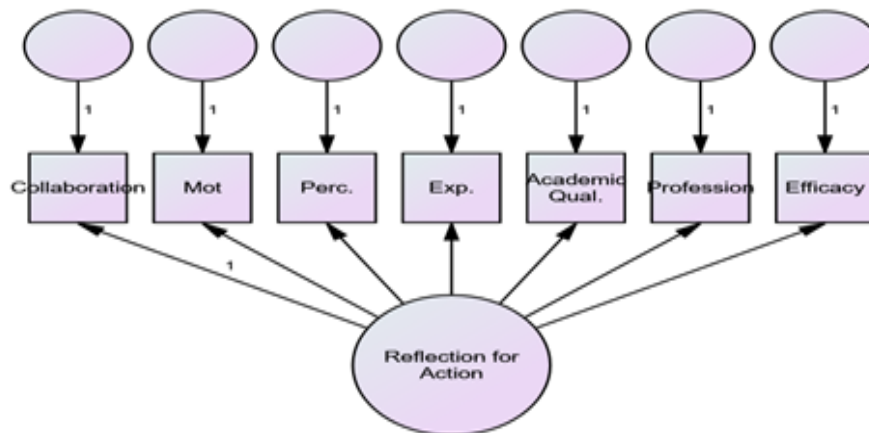
After conducting EFA and labeling the seven extracted components, a Confirmatory Factor Analysis (CFA) was run to check whether the questionnaire data fit the hypothesized model of Iranian EFL teachers' reflection for action. To this end, first, the descriptive statistics of the factors were calculated. Table 5 illustrates the results.

**Table 5**

*Descriptive Statistics of the Factors of the Study*

	N	Min.	Max.	M	SD	Skewness	Kurtosis
<b>Collaboration</b>	200	1.00	5.00	3.0400	1.00934	-.083	.337
<b>Motivation</b>	200	1.00	5.00	2.9200	1.06599	.165	.337
<b>Perception</b>	200	1.00	5.00	2.7200	1.16128	-.073	.337
<b>Experience</b>	200	1.00	5.00	2.9000	1.23305	-.075	.337
<b>Academic Qu.</b>	200	1.00	5.00	2.8600	1.10675	-.089	.337
<b>Professional.</b>	200	1.00	5.00	2.9200	1.20949	.159	.337
<b>Efficacy</b>	200	1.00	5.00	3.0200	1.16916	-.439	.337
<b>Valid N</b>	200						

Then, to eliminate the nonsignificant paths in the structural model and the indicators with low factor loadings (less than 0.40) the proposed model was analyzed by PLS-SEM. It should be mentioned that a PLS-SEM model consists of two elements: a measurement model, which represents the relationships between the latent factors and the observable factors and the structural model, which represents the relationships among the latent factors. The latent and the observable factors, in this study, were referred to as constructs (ovals) and indicators (rectangles), respectively (Hair, et al., 2018). Figure 2 presents the proposed model of the study.

**Figure 2***The proposed model of the study*

According to Figure 2, Reflection for action has a direct relationship with other components including collaboration (C), motivation (M), perception (P), experience (E), academic qualification (AQ), professional development (PD), and efficacy (EF). T-values were then calculated for evaluating the proposed model and the significance of the relationships. If the T-values between the two constructs be greater than 1.96, the relationship will be significant at 95% confidence level and it will be kept in the structural model. Otherwise, it will be eliminated (Hair, et al., 2017). The T-values of the relationships in the proposed model which were greater than 1.96 were kept in the structural model. After eliminating the nonsignificant relationships, the final model was obtained. Thus, all the evaluations were done on this model on the other stages of this study. Based on the results of the Table 6, all of the relationships of the factors under study with Reflection for action are significant since  $p < 0.5$ .

**Table 6***Pearson correlation of the factors of the study*

		C	M	P	E	AQ	PD	EF
C	Pearson Correlation	1	.325*	.271	.364**	.279*	.454**	.414**
	Sig. (2-tailed)		.021	.057	.009	.050	.001	.003
	N	200	200	200	200	200	200	200
M	Pearson Correlation	.325*	1	.295*	.429**	.388**	.565**	.411**
	Sig. (2-tailed)	.021		.038	.002	.005	.000	.003
	N	200	200	200	200	200	200	200
P	Pearson Correlation	.271	.295*	1	.507**	.191	.449**	.515**
	Sig. (2-tailed)	.057	.038		.000	.184	.001	.000
	N	200	200	200	200	200	200	200
E	Pearson Correlation	.364**	.429**	.507**	1	.333*	.460**	.511**
	Sig. (2-tailed)	.009	.002	.000		.018	.001	.000
	N	200	200	200	200	200	200	200

AQ	Pearson Correlation	.279*	.388**	.191	.333*	1	.525**	.381**
	Sig. (2-tailed)	.050	.005	.184	.018		.000	.006
	N	200	200	200	200	200	200	200
PD	Pearson Correlation	.454**	.565**	.449**	.460**	.525**	1	.492**
	Sig. (2-tailed)	.001	.000	.001	.001	.000		.000
	N	200	200	200	200	200	200	200
EF	Pearson Correlation	.414**	.411**	.515**	.511**	.381**	.492**	1
	Sig. (2-tailed)	.003	.003	.000	.000	.006	.000	
	N	200	200	200	200	200	200	200

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

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

## Measurement Model

### Goodness of Fit (GOF)

Although there is not any overall goodness of fit (GOF) indices in PLS-SEM for evaluating the overall model fit (Henseler et al., 2016), Tenenhaus et al. (2005) proposed a diagnostic tool of GOF index. Wetzels et al. (2009) reported the cut off values of 0.01, 0.25, and 0.36 as weak, medium, and large for GOF. These values for the proposed model are presented in Table 5. It should be mentioned that the value of GOF is dependent on and AVE values. In our models, the AVE values related to RC and values related to SRL falsely increase GOF values. Hence, the values of these two constructs were not entered in calculating GOF.

According to the procedure of mediating effect analysis recommended by Wen and Ye (2007), first, the direct effects of the factors on reflection for action were examined. Results showed that *experience* ( $\beta = 2.42$ ,  $p < 0.01$ ), *academic qualification* ( $\beta = 2.52$ ,  $p < 0.01$ ), and *professional development* ( $\beta = 2.48$ ,  $p < 0.01$ ) significantly predicted reflection for action. Moreover, in order to evaluate the structural relations, the proposed model was examined to ensure that a number of fit indices were met in the model fit including first, the chi-square, second, the normed fit index (NFI), third the comparative fit index, fourth the Root Mean Square Error of Approximation (RMSEA). The acceptable magnitude of each fit index criterion are presented in Table 7.

**Table 7**

*Acceptable magnitude of each fit index criterion*

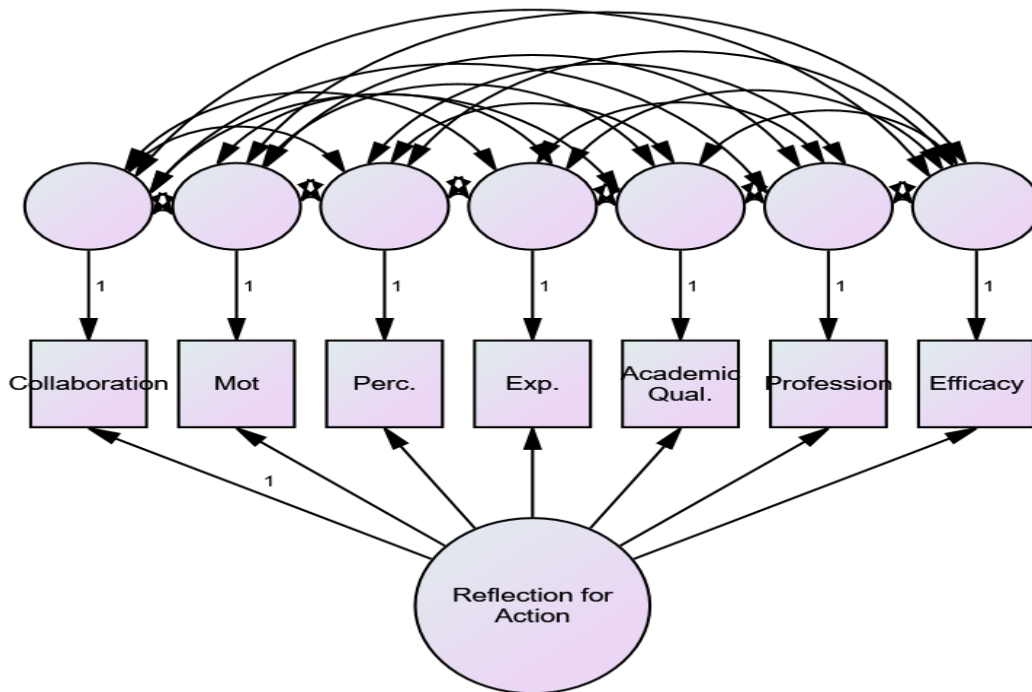
Criteria	Magnitude
Chi-square	Not Sig.
Chi-square/df ratio	$\leq 2$ or 3
CFI	$\geq .90\%$ or 95%
NFI	$\geq .90\%$ or 95%
RMSEA	$< .06$ or .08

Based on the obtained results, the chi-square (125.08), the chi-square/df ratio (2.23) had the acceptable fit thresholds in the present study. However, RMSEA was .112 which was slightly higher the acceptable criterion. In addition, GFI=.91 and NFI=.82 did not reach the acceptable fit

thresholds in the current research, and they were slightly below those thresholds. As stated by Tseng (2006), it is acceptable in structural equation modeling for some indices to not conform to the majority trend. Therefore, it was assumed that the proposed model was a moderately good fit with the fit thresholds data.

**Figure 3**

*Structural model of the study*



### Discussion

As to the research question of the study regarding the underlying structure of the items that make up 'reflection-for-action' in an Iranian EFL context, the results indicated that seven factors including collaboration, motivation, perception, experience, academic qualification, professional development, and efficacy can be considered as the main components. However, the previous study by Akbari, et al (2010) proposed a six factor model, such as: meta-cognitive, cognitive, practical, critical, moral and affective. Although these factors involved active control over the process of thinking that was used in learning situations, they were mostly belonged in the domain of experimental psychology and philosophy of mind. In contrary, in this study it was mostly attempted to explore interconnections between reflection and teaching.

The main factors derived from this study have been consistent with various previous studies in the field. *Collaboration*, as the first factor would be more appropriate to the reflection field. This claim also confirmed by Davydov (1995), who argued that reflection and collaboration were two activities teachers can use to change and improve their practice. However, finding the time and space to do so can be challenging. The collaborative reflective teaching cycle is a structured activity teacher can use to engage in reflection and collaboration. Collaboration, including activities such as joint lesson planning, reviewing and interpreting student work together, and writing common assessments has been cited as a primary factor in teachers' ability to implement change in their instruction as they move toward more effective pedagogical

strategies. Similarly, Freeman (1989) concluded that, collaboration is more than simply meeting with other teachers. It requires providing teachers with the opportunity to examine, critique, and support one another's work in a safe and supporting environment. By working together, the teachers were able to see aspects of the other practice that was not visible to other teacher.

In teacher education, reflective practice has been accepted as a valuable tool in stimulating professional development. Along with the current study, that *Professional Development* was one of the measuring factor, Ferraro (2000), also considered the advantages of reflective practice for teacher development, in ever-changing and challenging teaching contexts, reflective teaching can be regarded as a vital instrument for teachers to come up with helpful ideas, suggestions, and cope with tough situations. At this point, reflective practice may help teachers improve their effectiveness by gaining a broader understanding of their teaching practices. While doing so, it helps teachers realize their strengths and weaknesses, which will eventually contribute to students' learning in an even more powerful way (Rezaeyan & Nikoopour, 2013). In line with such concern, in another study Akyel (2000), proposed that the dialogue between teachers extends their beliefs about language teaching and learning emphasizing the importance of sharing knowledge in professional development. Moreover, Richards and Farrell (2005) deemed teacher professional development as long-term personal growth that aids teachers' defining and making sense of their teaching practice and of themselves as individuals.

*Motivation* emerged as another component of reflective teaching, in the same vein, Alrababi, (2014), proposed that, one influential factor in the language teaching enterprise is ensuring the existence of motivation on the part of learners; here, most language teachers believe that motivation is a key factor for success in language learning. When teachers teach reflectively this reflection might contribute to positive changes on the part of learners. One of the aspects which might receive this sort of reflection on the part of the teachers is learners' motivation (Wallace, 1998).

With regard to this newly-designed instrument, *efficacy* is another factor. Despite the ample evidence such as Babaie and Abedian (2016) and Ghasemzadeh (2019) supporting the positive impact of high self-efficacy on teaching performance and effectiveness, adopting a reflective approach to teaching entails a healthy dose of efficacy doubt (Wheatley, 2002). Therefore, low perceived efficacy sometimes encourages teachers to reflect more on how they teach and can improve their teaching.

*Perception* was another factor falling in this category. Seitova (2019), in her study used the term teachers' perceptions on reflective practice, so that the emergent perception theory on reflective teaching practices involves English teachers' awareness to reflective teaching through the help of students' and principals' perception, teaching practices inside their classes, teachers' accounts in teaching, teachers' reflection, teachers' practice to reflective teaching. When teachers are reflectively questioning their own teaching practices, they will become more reflective classroom teachers. Reflection is a skill teacher need to go deeper and apply by heart because they mold young minds.

Another factor identified as *experience*, which was in line with Bright's study (1996), who found Reflective learning was a way of allowing learners to step back from their learning experience, helping them to develop critical thinking skills and, improve on future performance by analyzing what they have learned and how far they have come.

The last identifying factor was *academic qualification*, contributed to the ongoing debate about the uses of reflective practice and to explore how reflective practice can produce knowledge of the mechanisms at work in contemporary higher education. In this respect, Bleakley (1999) realized that reflective practice has become the major model for continuing professional development in higher education. Moreover, the results of his study revealed that

supervisors themselves are adept at reflecting on different mechanisms and constraints, and the data produced warrants the treatment of reflective practice statement as a valuable source of research insights, as well as a tool of practical pedagogy.

### Conclusion

This study reflected findings from the mainstream literature on reflection for action as it showed that teachers viewed the reflection as consisting primarily of knowledge of language as a discrete and purely linguistic system of meaning-making, moreover, questioned the relevance of reflection for action and the language classroom practice. As it was pointed out earlier, not much has been done to operationalize the construct of reflection, and this is largely due to lack of consensus as to what reflection actually entails. In the current study, therefore, the first priority was to develop an instrument based on a tentative model of teacher reflection and its components.

To investigate underlying structure of the items and factors that made up 'reflection-for-action' in an Iranian EFL context, the empirical investigation was administered in an Iranian EFL context through exploratory and confirmatory analyses. It mainly aims at filling a pedagogical gap by proposing and validating a Reflection teaching inventory. Exploratory factor analysis was applied so as to identify the main factors and to summarize the data. The findings revealed that from among 10 factors, 7 factors including collaboration, motivation, perception, experience, academic qualification, professional development, and efficacy can be considered as the factors that made up reflection-for-action. Consequently, confirmatory factor analysis (CFA) was carried out to another 200 Iranian EFL teachers to check the fitness of the proposed model.

The result of CFA indicated that the model enjoyed a satisfactory level of goodness of fit, showing that these factors were not the results of random variance in the teachers' responses. In addition, based on such factors, a 38-item questionnaire for reflection-for-action was designed and validated. Moreover, the findings showed that, compared to other factors, experience, academic qualification and professional development significantly predicted reflection for action. Quite the contrary, it is a well-planned process of questioning existing procedures, gathering and recording information and producing new insights. 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.

Validity of the model and the questionnaire and the fact that the data gathered in this study through a reliable and valid questionnaire seem to have fit the model, this would not make this model vaccinated for any other deficiencies and shortcomings. Validating a data collection instrument is a cyclical process which does not stop even after the instrument has been initially validated. Therefore, replication studies are required that provide further validation from several dimensions. First, it was conducted with only university EFL instructors. Hence, further studies could be conducted with a sample of EFL teachers at primary and secondary level. Second, all the participants were Iranian EFL teachers, it would be interesting to replicate the study with samples of teachers from a more diverse range of cultures. If, as the literature has suggested, the reflection teaching paradigm is closely tied to Western belief systems and philosophies, it would be particularly interesting to administer and check the reliability and validity of this newly-designed instrument to teachers from these cultures and the material used in this study can be filled out considering gender and age differences.

## References

- Akbari, R., Bhezadpour, F. & Dadvand, B. (2010). Development of English language teaching reflection inventory. *System*, 38, 211-227.
- Akbari, R. (2008). Post method discourse and practice. *TESOL Quarterly*, 42(4), 78-83.
- Akbari, R., (2007). Reflection on Reflection: A Critical Appraisal of Reflective Practice in L2 Teacher Education. *System*, 35(2), 192-207.
- Akyel, A. (2000). Collaboration to explore teaching: A case study. *TESL Canada Journal*, 18(1), 58-74.
- Alrababi, F. (2014). The Effects of Teachers' In-Class Motivational Intervention on Learners' EFL Achievement. *Applied linguistics*, 1-28.
- Aukes, C., Geertsma, J., Cohen-Schotanus, J., Zwierstra, R., & Slaets, P.J. (2007) "The development of a scale to measure personal reflection in medical practice and education". *Medical Teacher*. 29, 177-182.
- Babaei, M., & Abednia, A. (2016). Reflective Teaching and Self-Efficacy Beliefs: Exploring Relationships in the Context of Teaching EFL in Iran. *Australian Journal of Teacher Education*, 41(9).
- Bleakley, A. (1999) From Reflective Practice to Holistic Reflexivity. *Studies in Higher Education*, 24, 315-330.
- Bright, B. (1996). Reflecting on reflective practice. *Studies in the Education of Adults*, 28(2), 162-184.
- Bond, D. & Keogh, R. & Walker, D. (1985). *Reflection: Turning Experience into Learning*. London: Kogan Page.
- Brookfield, S. (2004). The getting of wisdom: What critically reflective teaching is and why it's important.
- Bulman, C., & Schutz, S. (2004). *Reflective practices in nursing (3rd Ed)*. U.K: Blackwell Publishing.
- Cornford, I. R. (2002). Reflective teaching: empirical research findings and some implications for teacher education. *Journal of Vocational Education & Training*, 54(2), 219-236. <http://dx.doi.org/10.1080/13636820200200196>
- Davydov, V.V. (1995). The influence of L. S. Vygotsky on education theory, research, and practice. *Educational Researcher*, 4(3), 12-21.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: Houghton Mifflin.
- Duthilleul, Y. (2005), "Lessons learnt in the use of contract' teachers, International Institute for Educational Planning, UNESCO.
- Elliott, J. (1991). *Action research for educational change*. Buckingham: Open University Press.
- Erginel, S. S. (2006). Developing reflective teachers: A study on perception and improvement of reflection in pre-service teacher education (Doctoral dissertation). The graduate school of social sciences of Middle East Technical University.
- Farrell, T. (2013), *Reflective teaching: Principles and practice*. English Teaching Forum, 41(4), 14-21.
- Fathi, J., & Behzadpour, F. (2011). Beyond method: The rise of reflective teaching. *International Journal of English Linguistics*, 1(2), 241-252.
- Ferraro, J.M. (2000). Reflective practice and professional development. *ERIC Digest*, 4(4), 9-12.
- Fornell, C., and Larcker, D. F. (1981) "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error". *Journal of Marketing Research*, 39-50

- Freeman, D. (1989). Teacher training, development, and decision making: a model and related strategies for language teacher education. *TESOL Quarterly*, 23(1), 27-45.
- Ghasemzadeh, S. (2019). Teacher Self-Efficacy and Reflection as Predictors of Teacher Burnout. *Issues in Language Teaching (ILT)*, 8(2), 25-50.
- Gaiimo-Ballard C., & Hyatt L. (2012). Reflection-in-action teaching strategies used by faculty to enhance. Teaching and learning. Networks: *An Online Journal for Teacher Research*, 14(2), 1-11.
- Grant, A., Franklin, J., & Langford, P. (2002) "The self-reflection and insight scale: a new measure of private self-consciousness". *Social Behavior and Personality*. 30(8), 821–836.
- Habibpour, K. & Safari, R. (2012). *Comprehensive SPSS Application Guide in Survey Research*. Tehran University.
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2018). Advanced issues in partial least squares structural equation modeling (PLS-SEM). Thousand Oaks: Sage.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, forthcoming.
- Henseler, J., Fassott, G., Dijkstra, T.K. and Wilson, B. (2016), "Analysing quadratic effects of formative constructs by means of variance-based structural equation modelling". *European Journal of Information Systems*, 21(1), 99-112.
- Huang, N. (2008). On instantaneous frequency, Adv. Adapt. Data Anal., in press.
- Jasper, M. (2013). Beginning reflective practice (2nd). Cheltenham: Nelson Thornes.
- Karadag, M., & Sadik, F. (2012). Investigation of social studies teachers' reflective thinking levels in terms of socio demographic characteristics (an example of Sanliurfa province). *Cukurova University Faculty of Education Journal*, 41(2), 29-42.
- Karimi Allvar, N. (2008). *How we think: A restatement of the relation of reflective thinking to the education process*. Washington, DC: Health, & Co., Boston.
- Kember, D., Doris, Y.P., Leung, A., Alice, Y. L., & Yeung, E. (2000) "Development of a questionnaire to measure the level of reflective thinking". *Assessment & Evaluation in Higher Education*. 25(4), 381–395.
- Mathew, N. G. (2017). Reflective classroom practice for effective classroom instruction. *International Education Studies*, 5(3), 205-207.
- Mulford, B. (2003). Leadership for organisational learning and improved student outcomes - what do we know? *NSIN Research Matters*. 15, 1-8.
- Núñez, A., & Téllez, M. F. (2008). Meeting students' needs. *Enletawa Journal*, (1), 65-68.
- Odeh, Z., Kurt, M., & Atamtürk, N. (2010). *Reflective practice and its role in stimulating personal and professional growth*. Retrieved September 25, 2015, from the World <http://www.qou.edu/english/conferences/first>
- Pacheco, A.Q. (2005). Reflective Teaching and its Impact on Foreign Language Teaching. *Revista Electrónica "Actualidades Investigativas en Educación"*, 5, 1-19.
- Razaeyan, M. & Nikoopour, J. (2013). The relationship between reflectivity of foreign language teachers with Iranian students' achievement. *Journal of Language Sciences & Linguistics*, 1(1), 9-20.
- Richards, J.C., & Farrell, T.S.C. (2005). *Professional development for language teachers*. Cambridge, UK: Cambridge University Press. <http://dx.doi.org/10.1017/CBO9780511667237>.
- Richards, J. C., & Lockhart, C. (1999). *Reflective teaching in second language classrooms*. New York: Cambridge University Press.



- Richards, J. (1991). Teacher development through peer observation. In press. *TESOL Journal*.
- Salmani-Nodoushan, M., A., (2007) Language Teaching: State of the Art. *The reading matrix*, 6(2), 125-140.
- Schön, D. A. (1987). Educating there reflective practitioner. San Francisco, US: Jossey-Bas
- Schön, D. (1983). *The Reflective Practitioner: How Professionals Think in Action*.
- Shaheen, S. A. (2012) North American Carsharing: 10-year retrospective. *Transportation Research Record*, 21(10), 35–44.
- Sobral, T. (2001) “Medical students’ reflection in learning in relation to approaches to study and academic achievement”. *Medical Teacher* 23, (5), 508–513.
- Soodmand Affshar, H., & Farahani, M. (2014). Reflective thinking and teaching practices: A precursor for incorporating critical thinking into the classroom. *International Journal of Instruction*, 5(1), 167-182.
- Seitova, M. (2019). Student teachers’ perceptions of reflective practice. *International Online Journal of Education and Teaching (IOJET)*, 6(4). 765-772.
- Tabachnick, B.G. & Fidell, L.S. (2001) Using Multivariate Statistics. 4th Edition, Allyn and Bacon, Boston.
- Tajik, L., & Ranjbar, K. (2018). Reflective teaching in ELT: Obstacles and coping strategies. *Journal of Research in Applied Linguistics*, 9(1), 148-169.
- Tenenhaus, M., Vin, E., Chatelin, Y. M., & Lauro, C. (2005) PLS path modeling. *Comput Stat Data Anal* 48(1).159–205.
- Tok, T. N. & Dolapçioğlu, S. D. (2013). Views of the novice teachers regarding planning and implementing the plan. *International Journal of Educational Research*. 1 (4), 27-34.
- Tseng, W. T. (2006). *A Survey of University Students’ Vocabulary Knowledge in Taiwan*. Unpublished Master Thesis, University of Nottingham.
- Wallace, M. (1998). *Action Research for Language Teachers*. Cambridge: Cambridge University Press.
- Wen, V., Ye, L. (2007). Attitudes and motivation in second language learning. Rowley, MA: Newbury House.
- Wetzels, M., Gaby, O. S., & Claudia, V. O. (2009). “Using PLS Path Modeling for Assessing Hierarchical Construct Models: Guidelines and Empirical Illustration”. *MIS Quarterly*, 33 (1), 177-195.
- Wheatley, K. F. (2002). The potential benefits of teacher efficacy doubts for educational reform. *Teaching and Teacher Education*, 18, 5–22.
- Wright, S.P., Horn, S.P., & Sanders, W.L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation n Education*, 11(4), 57-67.
- Yuan, R. & Lee, I. (2014). Pre-service teachers’ changing beliefs in the teaching practicum: *Three cases in an EFL context*. *System*, 44, 1-12.
- Zeichner, K. M. (2013). *Reflective Teaching an Introduction*. New York. Routledge.
- Zeichner, K.M. (2007). *Reflective teaching*. Mahwah, NJ: Lawrence Erlbaum Associates.

## Appendices

### Appendix A: The Reflective Teaching Instrument (Final Instrument)

Dear respondent this questionnaire is devised with the aim of looking into your actual teaching practices as a professional teacher. To that end, your careful completion of the questionnaire will definitely contribute to obtaining real data which is crucial for more accurate findings. Therefore, please check the box which best describes your actual teaching practices.

The information will be kept confidential and will be used just for research purposes. Thank you very much in advance for your time and cooperation.

Items	Never	Rarely	Sometimes	Often	Always
<b>A. Collaboration</b>					
1- I ask my students whether they like a teaching task or not.					
2-I ask my colleagues to observe my teaching and comment on my teaching performance.					
3- I talk about the accomplishments/failures of each lesson with my colleagues, after each session.					
4-I discuss practical/theoretical issues regarding being prepared before coming to class with my colleagues					
5- I empathize with colleagues'/others' viewpoints.					
<b>B. Motivation</b>					
6- I try to find out which aspects of my teaching provide me with a sense of satisfaction.					
7- I make decisions about the events of the class as they happen.					
8-Sometimes I find myself saying things and I have no idea why I said them.					
<b>C. Perception</b>					
9- I have a file where I keep my accounts of my teaching for reviewing purposes.					
10 - I think about my strengths and weaknesses as a teacher.					
11- I think of inconsistencies and contradictions that occur in my classroom practice.					
12-I acknowledge what students bring to the learning process					
13 -It's easy for me to figure out what someone else is thinking or feeling.					
<b>D. Experience</b>					
14 -I write about the accomplishments/failures of each lesson after each session.					
15-I think about my teaching strategy and the way it is affecting my teaching.					

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16- I often evaluate my experience so I can learn from it and improve for my next performance.

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17- I like to think over what I have been doing and consider alternative ways of doing it.

---

18- I see teaching practices as remaining open to further investigation.

---

19- I observe events and situations that involve me.

---

20- I identify alternative ways of representing ideas and concepts to students.

---

### **E. Academic Qualification**

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21- I see no need for thoughtfully connecting teaching actions with student learning or behavior.

---

22 - I modify teaching strategies without challenging underlying assumptions about teaching and learning.

---

23- I consider students' perspectives in decision making.

---

24- I change my behavior or actions as different events of the class happen.

---

25- I do research/investigate issues to solve problems.

---

26- I make image/sound record of my teaching issues.

---

27- I am sufficiently empowered to teach.

---

### **F. Professional Development**

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28- I often reflect on my actions to see whether I can improve what I did.

---

29- I read books/articles related to effective teaching to improve my classroom performance.

---

30- I participate in workshops/conferences related to teaching/learning issues.

---

31- I establish a clear set of rules for my students to follow in terms of their classroom attendance and the way they will be evaluated at the end of the course.

---

32- I read the research works in the field of my study.

---

33- I overcome any self-imposed barriers, habits.

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### **G. Efficacy**

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34- I carry out small-scale research activities in my classes to become better informed of learning/teaching processes.

---

35-I think of the meaning or significance of my job as a teacher.

---

36- I pay attention to the impact of my actions on others' feelings.

---

37- I like to think about the reasons behind my actions.

---

38- I have genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking.

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