

**Original Article**

## Professionalism as a Predictor of Reflective Teaching and Criticality of EFL Teachers

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### Abstract

The professional development of EFL teachers is supposed to include and be related to many of the teacher's characteristics that develop during their professional teaching practice. EFL teachers' critical thinking and reflective teaching can also be influenced by their developing cognitive and meta-cognitive professional skills and competencies. This study investigated the relationship between the professional development of EFL teachers and their reflective teaching and critical thinking. It also investigated whether any component(s) of professional development would best predict reflective teaching and critical thinking. To this end, 45 Iranian EFL teachers in Sanandaj participated in the study. They completed three questionnaires as follows. One was a Teachers' Professional Development Questionnaire to measure the participant teachers' professional development. The second questionnaire was a Teachers' Reflective Thinking Questionnaire to assess the participants' reflective thinking. The third questionnaire was a Critical Thinking Appraisal Form to measure the participants' critical thinking. Pearson's product-moment correlation coefficient was calculated to check the correlation of professional development and its subscales with reflective teaching and critical thinking. Multiple standard regression was run to check whether any component(s) of professional development would predict reflective teaching and critical thinking. The results indicated that out of the three components of professional development, namely, subject-matter field, dedicated field, and pedagogical field, it was the pedagogical field that significantly correlated with and predicted both reflective teaching and critical thinking.

**Keywords:** Critical Thinking, Professional Development, Professionalism, Reflective Teaching

## 1. Introduction

Teaching in general and second language teaching, in particular, are complex practices that substantially rely on the professional qualifications and expertise of teachers. Teachers are among the influential factors which greatly influence and predict the outcomes of the language teaching and learning processes (Campbell, 2000). Considering the important role of teachers in second language learning (SLL) outcomes, the question arises as to what characteristics of language teachers contribute to their effective and efficient teaching practice. One of the highly attested qualities of a language teacher which has abundantly been introduced in the teacher development literature is *reflective teaching* (e.g., Clarke & Otaky, 2006; Pollard et al., 2008). The concept of reflective teaching was originally introduced by Dewey (1933) and Schon (1983). Dewey's idea rested on his classification of three different types of actions: namely, impulsive action, routine action, and reflective action. Impulsive action is a function of trial and error based on instinctive stimuli. Routine action is governed by such pre-requisite conditions as authority, tradition, preconception, and prejudice. Reflective action, however, is "the 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 conclusions to which it tends" (Dewey, 1933, p. 118).

Dewey's reflective action reminds Schon's (1983) distinction between two types of reflectivity, namely reflection-in-action and reflection-on-action. The former refers to "questioning the assumed structure of knowing-in-action", giving rise to an "on-the-spot experiment" (p. 25). As stated by Griffiths (2000), it happens when "professionals are faced with a situation which they experience as unique or containing an element of surprise. Rather than applying theory or past experience in a direct way, professionals draw on their repertoire of examples to reframe the situation and find new solutions" (p. 542). On the other hand, reflection-on-action relates to teachers' retrospectively considering and analyzing their performance and practice critically in order to gain knowledge from their practical experience. This latter type of reflectivity entails teachers' critically analyzing and reflecting on their actions (Soodmand Afshar & Farahani, 2015). Reflective teaching has been considered an element of many studies addressing teacher-related characteristics and their roles in modern educational systems (e.g., Urzua & Vasquez, 2008; Watts & Lawson, 2009).

A second important characteristic of efficient teachers is critical thinking which, interestingly, originates in reflective thinking. Theoretical accounts and empirical studies alike have discussed reflective thinking and reflective teaching concerning critical thinking and have tried to associate the former with the latter because it is generally assumed that reflectivity influences one's critical thinking (e.g., (e.g., Abdar & Shafaei, 2022; Black, 2015; Choy & Oo, 2012; Mermelstein, 2018). Choy and Oo (2012) state that reflective thinking facilitates critical thinking where he asserts "It is part of the critical thinking process specifically referring to the processes of analyzing and making judgments about what has happened" (p. 168). Reflection is believed to constitute a central element of critical thinking. Critical thinking entails such components as analysis, evaluation, inference, interpretation, explanation, and self-regulation (Facione, 2006), and renders the individual inquisitive, reflective, considerate, and willing to learn forever because it entails the ability to focus on the problem, uncover assumptions underlying a problem, reason inductively and deductively, and judge the validity and reliability of assumptions and sources of information.

Many teacher characteristics, critical thinking, and reflective teaching included can be subsumed under the general concept of teachers' professional development because they are developmentally get restructured and reshaped as teachers accumulate professional knowledge and experience in their teaching practice and reflect on it.

Different studies have focused on EFL teachers' reflective teaching and critical thinking from different perspectives, especially in terms of how one influences or is related to the other. However, a paucity of research exists on whether, and to what extent, EFL teachers' reflectivity and criticality are related to and can be predicted by their professional development and qualifications. Therefore, this study was an empirical attempt to bridge the gap in previous studies and explore the relationship between Iranian EFL teachers' professionalism and their reflective teaching (reflectivity) and criticality. More precisely, this study aimed at investigating whether the two characteristics of reflective teaching and critical thinking are equally or differentially related to second language teachers' professionalism and whether their professionalism can be considered a predictor of their reflectivity and criticality.

If the relationship between these teacher characteristics is investigated and any go-togetherness between them is observed, our expectations of language teachers in terms of

their reflectivity and criticality in all aspects of their professional practice can be regulated and modified. In addition, such research will increase the certainty with which we consider professionalism as a criterion for judging a particular language teacher's reflective teaching and critical thinking. Also, each of the variables under study, i.e. professional development on the one hand, and reflective teaching and critical thinking, on the other hand, can be used for predicting the other one. In other words, the significance of this study is that it will let us know whether language teachers' reflective and critical thinking about their practice develops parallel to an increase in their professional development or whether they are not necessarily related linearly. Then, such insights can help us more logically and realistically count on language teachers' professional experience and development as indexes of their reflective teaching and critical thinking as two important traits of efficient teachers.

## **2. Literature Review**

This section will provide a review of the theoretical literature on professionalism, criticality, and reflective teaching along with the perspectives from which they have empirically been studied concerning each other or other constructs and what future studies should be focusing on.

All three constructs are closely interrelated and researchers have often implicitly or explicitly discussed them with one another. The qualities of teacher criticality and reflectivity are considered two components that contribute to teachers' professional development and develop over time as teachers gain more professional experience and their mental models change as a result of interacting with professional challenges and necessities. Kuhn (1999) argued that the development of an individual's critical thinking ability depends on their changing their mental models through maturity and getting exposed to more learning experiences over time.

By extension, her idea can be applied to the development of EFL teachers' critical thinking skills which results from their reflection on and benefiting from their professional experiences and practices. Teacher reflection, according to Ma and Ren (2011), is seen as "a process that can facilitate teaching, learning, and understanding, and that plays a central role in teacher professional development" (p. 154). Some scholars hold the view that teacher reflection is a quality that can promote teachers' professional development because

it encourages reasoning and contemplation on one's teaching practice which will, then, contribute to teachers' innovativeness and critical planning for change and continued learning (Dewey, 1933; Schon, 1983). Riyanti (2021) states that teacher reflection significantly contributes to teachers' professional development because it helps them identify their strengths and weaknesses in teaching and try to become more efficient teachers.

It logically follows that teachers' professional development can go hand in hand with developments in their reflectivity and criticality. This encourages one to opt for empirically examining the relationship between these teacher qualities. Teachers' reflecting on their professional practices can refine and improve their mental states about how best to teach. On the other hand, this reflectivity, which can enhance one's criticality, is itself a function of teachers' professional qualifications which mature over time. Hung (2008, as cited in Rahnama et al., 2016) describes reflection as a professional development strategy through which professionals are equipped with opportunities to explore, articulate, and represent their ideas and knowledge. There seems to be both theoretical and empirical evidence for the idea that teachers' reflective practice gives rise to their critical thinking and both of them contribute to their professional development.

Different studies have addressed the notions of teachers' reflective teaching and critical thinking from different perspectives. Mousapour Negari and Beiranvand (2013) investigated the role of reflective teaching in enhancing Iranian EFL teachers' critical thinking ability and found a significant relationship between them. Soodmand Afshar and Farahani (2015) addressed the question of whether EFL teachers' teaching experience was related to their reflective teaching and concluded that teaching experience significantly differentiated the teachers in terms of reflective teaching. Noormohammadi (2014) studied the relationship between teacher reflection and teacher efficacy and autonomy and realized that there teachers' self-efficacy was significantly positively related to reflective practice. Choy et al. (2017) also found that reflective thinking contributed to EFL teachers' self-efficacy and instructional awareness. Mahmoodi-Shahrebabaki et al. (2015), who investigated the relationship between teaching experience and reflectivity, found that there was a negative relationship between teaching experience and teacher reflectivity. Abdar and Shafaei (2022) found a significantly positive relationship between teachers' reflective thinking and their teaching style. Sharifi and Abdolmanafi Rokini (2014) found that

teachers improve their professional qualifications if they reflect on their colleagues' practices and evaluate and judge one another. Parsi and Ashraf (2020) investigated the relationship between EFL teachers' teaching experience and their critical thinking and found that their teaching experience was positively related to and strongly predicted their critical thinking. Parsi (2017) explored the relationship between the critical thinking of EFL teachers and their use of motivational strategies and observed no significant relationship between them. However, critical thinking was found to be significantly related to their teaching success and efficacy. Other studies indicated that critical thinking was negatively related to teacher burnout but positively related to teachers' professional success and attainment (Khodabakhshzadeh & Ghaemi, 2011; Khodabakhshzadeh et al., 2017)

Previous studies suggest that EFL teachers' professional development has a mutual relationship with their thinking critically and reflecting on their actions. However, to the best of the researchers' knowledge, especially in the Iranian context, no study has ever directly probed the meaningfulness and strength of such relationships and whether EFL teachers' professional development can be considered a predictor of their reflective teaching and critical thinking. Filling this gap in previous studies constitutes the primary focus of the present study. Specifically, this study has aimed at answering the following questions.

1. Is there any relationship between the professional development and reflective teaching of Iranian EFL teachers?
2. Is there any relationship between the professional development and critical thinking of Iranian EFL teachers?
3. Which component(s) of professional development can best predict the reflective teaching of Iranian EFL teachers?
4. Which component(s) of professional development can best predict the critical thinking of Iranian EFL teachers?

### **3. Methodology**

#### **3.1. The Design and Context of the Study**

This study was conducted following a correlational design. It aimed to explore the correlation between EFL teachers' professional development on the one hand and their reflective teaching and critical thinking on the other hand. Furthermore, it attempted to

explore which component of teachers' professional development would best predict their reflective teaching and critical thinking. Professional development was the independent predictor variable, and reflective teaching and critical thinking were the dependent variables. The study was implemented and carried out in the EFL context of Iran, the city of Sanandaj.

### **3.2. Participants**

The participants in this study were 45 female part-time and full-time English EFL teachers who were teaching English at private English language institutes in Sanandaj. They were selected through convenience sampling. They were native speakers of Kurdish, aged between 27 and 46 years. They were given a background questionnaire to provide their demographic information, including their age, L1 background, teaching experience, workplace, and so on. Next, co-ordinations were made with them about when and where to attend for answering the questionnaires.

### **3.3. Instruments**

Four questionnaires were used for this study. First, a demographic questionnaire was used to collect demographic information about the participants. Second, a professionalism questionnaire developed and validated by Beijaard et al. (2004) was used to measure the participants' professional development. Third, Choy and Oo's (2012) Teachers' Reflective Teaching questionnaire was used to measure the participants' reflective thinking. Fourth, Watson and Glaser's (1980) Critical thinking Appraisal Form was used to measure the participant teachers' critical thinking skills.

### **3.4. Data Collection Procedure**

First, the participants were briefed about the nature of the study, its purpose, and how they were going to answer the questionnaires. Then, they were made familiar with the concepts of professionalism, reflective thinking, reflective teaching, and critical thinking in an attempt to help them answer the relevant scales with more readiness and precision. Next, they were required to answer the teachers' professional development questionnaire on a separate day and the reflective teaching critical thinking questionnaires on two separate sessions consecutively. After administering the questionnaires and collecting the

participants' response data, the obtained numerical data were analyzed to answer the research questions. The data for each item of the different questionnaires were fed into the SPSS software together with their total scores on each component of the questionnaires. Next, the descriptive statistics of the data were calculated, the reliability of the scales was calculated, and the correlations between the scores on the professionalism questionnaire on the one hand and the scores on the reflective teaching and critical thinking questionnaires, on the other hand, were calculated.

### **3.5. Data Analysis Procedure**

Chronbach's Alpha was checked to estimate the reliability of the different scales. To answer the first research question about the relationship between the professional development and reflective teaching of Iranian EFL teachers, Pearson's Product-moment correlation was calculated between the total scores obtained from the two relevant questionnaires. Next, to answer the second research question about the relationship between the professional development and critical thinking of Iranian EFL teachers, Pearson's Product-moment correlation between the scores of the questionnaires was computed. To answer the third and fourth research questions about the prediction of reflective teaching and critical thinking by EFL teachers' professional development, two standard Multiple Regressions were run.

## **4. Results**

This section presents the following statistical results. First, it will present the descriptive statistics for the scores obtained from the professional development, reflective teaching, and critical thinking questionnaires in Table 4.1. Next, it will display the results of the Kolmogorov-Smirnov (K-S) test for checking the distribution of the scores of the three questionnaires in Table 4.2.

Table 4.1 above summarizes the descriptive statistical information about the scores obtained from the three questionnaires including the number of items of each scale or each component of that scale, minimum and maximum scores, the mean, and the standard deviation. A glance at the table reveals these statistical characteristics of the scores on each scale or component. In Table 4.2 below, the Kolmogorov-Smirnov (K-S) test results have



been displayed which indicate whether the obtained scores on the different scales have been normally distributed or not.

Table 4.1.

*Descriptive Statistics for the Professional Development, Reflective Teaching Efficacy, and Critical Thinking Scores*

	<i>N</i>	Minimum	Maximum	Mean	<i>Std. Deviation</i>
PD	14	35	64	50.53	6.51
SMF	4	6	20	15.76	3.76
DF	6	6	30	19.33	7.35
PF	4	9	20	15.27	3.62
RT	33	79	165	132.76	26.08
CT	83	93	205	161.24	35.88

PD: Professional Development

SMF: Subject Matter Field (Component 1)

DF: Dedicated Field (Component 2)

PF: Pedagogical Field (Component 3)

RT: Reflective Teaching

CT: Critical Thinking

Table 4.2.

*Kolmogorov-Smirnov (K-S) Test of the Distribution of Scores*

	Statistic	<i>df</i>	<i>Sig.</i>	Statistic	<i>Df</i>	<i>Sig.</i>
D	.114	45	.17	.977	45	.489
SMF	.163	45	.24	.910	45	.002
DF	.160	45	.16	.908	45	.002
PF	.153	45	.09	.911	45	.002
CT	.152	45	.11	.898	45	.001
RT	.147	45	.16	.896	45	.001

a. Lilliefors Significance Correction

As can be seen in Table 4.2, the *Sig.* values corresponding to the total scores obtained from the professional development questionnaire, its subscales, RT, and CT outweigh the significant level of 0.5, which allows us to consider the distribution of the scores normal. Therefore, for testing research hypotheses 1 and 2, Pearson's product-

moment correlation was computed between the scores on the professional development scale and those on the RT and CT scales, as indicated in Table 4.3 below.

Table 4.3.

*Correlation Coefficients Between Professional Development and Reflective Teaching and Critical Thinking Questionnaire Scores*

	Reflective Teaching	Sig.	Critical Thinking	Sig.
PD	-.41	.006	-.46	.002
SMF	-.46	.001	-.48	.001
DF	-.52	.000	-.60	.000
PF	.83*	.000	.93*	.000

As shown in Table 4.3, the highest correlation coefficient was observed between the pedagogical field component of professional development and reflective teaching ( $r = .83^*$ ), and the correlations between the other components of professional development such as subject-matter field and dedicated field were significant but negative, indicating a reverse relationship between each pair of variables. Therefore, the pedagogical field was the only component of professional development that turned out to be highly positively correlated with the reflective teaching of the EFL teachers in this study. As for the correlations between professional development and critical thinking, again the highest correlation coefficient was obtained between the pedagogical field component of professional development and CT ( $r = .93^*$ ). Interestingly, negative correlation coefficients were observed between the other two components of professional development, i.e., subject-matter field and dedicated field, and CT. Again, the results indicate that the pedagogical field was the only component of professional development that was significantly correlated with CT, while the other components were significantly but negatively correlated with CT.

Two Standard Multiple Regressions were run to test the research questions 2 and 3 addressing the prediction of EFL teachers' reflective teaching and critical thinking by their professional development, respectively, as shown below.

Table 4.4.

*Model Summary for the Prediction of EFL Teachers' Reflective Teaching and Critical Thinking by their Degree of Professional Development*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Reflective teaching	.829	.687	.664	15.13
Critical thinking	.918	.843	.832	14.72

In Table 4.4, a Model Summary of regression analysis for professional development scores in predicting reflective teaching and critical thinking has been displayed. According to the results shown in this table, the correlation coefficient between the total score of these two variables is .83 and Squared R is .69, which indicates the degree of variance prediction and the degree of changes taking place in reflective teaching as a result of changes in the components of professional development. Concerning the critical thinking variable, the related values are .92 and .84, respectively, which highlight the strength of the prediction of the variance and the degree of changes in CT by the components of professional development. Table 4.5 shows the ANOVA results which examine the regression model in predicting EFL teachers' reflective teaching and critical thinking by their professional development.

Table 4.5.

*ANOVA Results for the Prediction of EFL Teachers' Reflective Teaching and Critical Thinking by their Professional Development*

Model	Sum of Squares	Df	Mean Square	F	Sig.
Reflective teaching	0545.317	3	6848.439	.000	29.931
	9380.994	41	228.805		
	29926.311	44			
Critical thinking	47771.522	3	15923.841	.000	73.466
	8886.789	41	216.751		
	56658.311	44			

a. Predictors: (Constant), PF, SMF, DF

b. Dependent Variables: RT, CT

As shown in Table 4.5, the obtained F-value is (29.931,  $p < 0.01$ ) which is significant at  $\alpha=0.01$ . According to the results of Table 4.5, the accuracy of the regression model is

substantiated, and based on the results in Table 4.4 above, it is shown that the participants' reflective teaching has been predicted by some component of professional development. Therefore, the third research question in this study has adequately been cared for, in that, teachers' reflective teaching was significantly predicted by some component(s) of professional development. Concerning critical thinking, the F-value is (73.466,  $p < 0.01$ ) which is significant at the  $\alpha = 0.01$  level of significance, indicating that the accuracy of the regression model is substantiated. And, based on the results in Table 4.4 above, it can be concluded that some professional development component(s) has/have strongly predicted the degree of CT. Therefore, the fourth research question about whether any component of professional development would best predict the CT of EFL teachers has been accounted for. Table 4.6 shows the results of multiple regression analysis for predicting the degree of RT and CT by the components of professional development.

Table 4.6.

*Multiple Correlations Probing the Prediction of EFL Teachers' Reflective Teaching and Critical thinking by The Components of their Professional Development*

Model	Unstandardized Coefficients		Standardized Coefficients		
	<i>B</i>	<i>Std. Error</i>	Beta	<i>t</i>	<i>Sig.</i>
(Constant)	78.594	27.113		2.899	.006
SMF	-.952	.685	-.137	-1.389	.172
DF	-.359	.427	-.101	-.841	.405
PF	4.985	.947	.692	5.264*	.000*
(Constant)	61.496	26.389		2.330	.025
SMF	-.787	.667	-.082	-1.181	.244
DF	-.516	.416	-.106	-1.242	.221
PF	8.00	.922	.807	8.680*	.000*

As indicated by Standardized Beta coefficients in Table 4.6, among all the components of professional development, the Pedagogical Field Component ( $\beta = .692$ ,  $p < 0.05$ ) could strongly predict teachers' reflective teaching. Considering the *t* value for this variable ( $t = 5.264$ ) which is significant at  $\alpha = 0.05$ , it can be claimed that this component was the strongest predictor of the degree of EFL teachers' reflective teaching. Beta coefficients also show the relationship between each component of professional development and EFL teachers' reflective teaching. The beta values provide comparisons

of the contribution of each independent variable. In this case, the largest beta coefficient is for Pedagogical Field ( $\beta = .692$ ). This means that this variable makes the strongest unique contribution to explaining the dependent variable which is EFL teachers' reflective teaching. However, the Beta values for other components SMF ( $\beta = -.137$ ) and DF ( $\beta = -.101$ ) were very much lower in magnitude. This indicates that they made less contribution to the prediction of reflective teaching.

As the Standardized Beta coefficients in Table 4.6 above indicate, among all the components of professional development, the Pedagogical Field Component ( $\beta = .807$ ,  $p < 0.05$ ) was the only component that most strongly predicted the degree of CT of the EFL teachers. Taking into account the  $t$  values of this variable (8.680) which is significant at  $\alpha = 0.05$ , it can be concluded that this component could strongly predict the degree of EFL teachers' CT. Beta coefficients also show the relationship between each component and EFL teachers' CT. The beta values indicate the comparative contribution of each independent variable. In this case, the largest beta coefficient belongs to the pedagogical field ( $\beta = .807$ ). This means that this variable makes the strongest unique contribution to explaining the dependent variable which is EFL teachers' CT. On the contrary, the Beta values for other components SMF. ( $\beta = -.082$ ) and DF ( $\beta = -.106$ ) did not meet statistical significance, which suggests that they made considerably less contribution to the prediction of EFL teachers' CT.

## 5. Discussion

This study was an empirical attempt to explore the relationship between EFL teachers' professional development and their reflective teaching and critical thinking. Also, it addressed whether any components of professional development would predict teachers' reflective teaching and critical thinking. Particularly, in response to the first and second research questions, the results showed that the highest correlation coefficients were found between the Pedagogical Field Component of professional development and both reflective teaching and critical thinking. This might be interpreted by saying that EFL teachers' reflectivity and criticality have something to go with their pedagogical knowledge and expertise. That is, for an EFL teacher to be reflectively practicing and critical thinking in his practice, he must have an adequate repertoire of pedagogical knowledge and skills. Otherwise, he would not be equipped with any pre-requisite requirements for materializing

and manifesting his or her reflection on action and critical analysis of his professional practice.

That the other components of professional development were reversely correlated with teachers' reflective teaching and critical thinking can imply that they cannot be considered pre-requisites for EFL teachers' reflective and critical thinking at least because their knowledge of the sheer subject matter without pedagogical orientations and preferences and their commitment to their professional career, when these are not coupled with pedagogical knowledge and commitment, do not necessarily go together with reflective thinking and teaching and critical thinking.

The findings appear to lend empirical support to the previously raised hypothesis in this study that if critical thinking ability is influenced by the course of time spent on a particular activity, profession, or practice, and if critical thinking follows a developmental progression over time, it is likely that the development of critical thinking and reflective teaching in EFL teachers is also a function of their professional development. This finding is following the findings in other studies that EFL teachers' reflective teaching enhances their teaching efficacy and success which are considered two main components of professional development (Choy et al., 2017; Khodabakhshzadeh et al., 2017; Khodabakhshzadeh & Ghaemi, 2011; Noormohammadi, 2014; Parsi, 2017).

In particular, the findings accord with O'Hare and McGuinness' (2009) finding that the Irish university students' critical thinking scores were a matter of their on-campus experience, indicating that critical thinking about a given field of activity is influenced by the period of time spent on that field of activity. The results also support Gellin's (2003) finding that interaction with the faculty and faculty peers, being and living on campus, and engagement in college clubs facilitated university students' critical thinking skills and strategies and reflect Kuhn's (1999) idea about a developmental progression of critical thinking ability over time. These claims rest on the premise that pedagogical knowledge and experience were most strongly correlated with the critical thinking and reflective teaching of the participating EFL teachers in the present study. Further empirical support for this piece of finding can be found in other studies which revealed a positive relationship between EFL teachers' teaching experience and reflective teaching (Parsi & Ashraf, 2020; Soodmand Afshar & Farahani, 2015). However, there is counterevidence for

this finding in Mahmoodi-Shahrebabaki and Rajabi Kondlaji (2015) who found a negative correlation between teachers' teaching experience and reflective teaching.

Particular interest in this study is the finding that the same component of professional development was most significantly correlated with both critical thinking and reflective teaching of the EFL teachers. This can imply that both critical thinking and reflective teaching have a lot in common and overlap to a considerable degree; hence, both turned out to be correlated with the same professional development component.

This claim has fortunately been endorsed by the results of regression analysis which examined which component(s) could best predict the critical thinking and reflective teaching of the EFL teachers. In response to the third and fourth research questions, it was interesting to find out that again the same component of professional development most strongly predicted both reflective teaching and critical thinking. This finding provides further support for the previously made claim about the relationship between pedagogical knowledge and expertise and critical thinking and reflective teaching as two closely related constructs. In addition to signaling the relationship between pedagogical knowledge and critical thinking and reflective teaching of EFL teachers, this finding gives us further insight into the close connection between critical thinking and reflective teaching. In other words, the fact that both critical thinking and reflective teaching were predicted by the same professional development component reflects the great common variance existing between the criticality and reflectivity of EFL teachers. Otherwise, it would not be possible for both constructs to be predicted exactly by the same component of professional development.

To sum up, considering the subcomponents which make up the two constructs of critical thinking and reflective teaching, the findings of this study seem logical and plausible in that some degree of pedagogical knowledge and experience must be present for a teacher to be able to think critically and teach reflectively in his professional practice. Such pedagogical knowledge must be anchoring teachers' reflective thinking and reflective teaching as well as their criticality to their professional expertise and practice. It acts as a raw material that underlies a teacher's ability and opportunity for thinking about what he has done. But nothing could be done without a teacher's pedagogical field knowledge and skills.

## 6. Conclusion

The findings of this study can be useful on the following grounds. First, they give us the insight that such teacher characteristics as reflective teaching and critical thinking are associated with each other since both of them seem to be related to a common variable. That common variable was pedagogical knowledge and skills as a component of professional development. This suggests that reflectivity and criticality themselves are related constructs that overlap to a great extent. Perhaps it is safe to argue that critical thinking feeds back into and leads to reflectivity and, in turn, is influenced by one's reflectivity. Second, the findings reveal that professional development subsumes such concepts as criticality and reflectivity which are considered characteristics of good EFL teachers. Logically, then, it appears that both reflectivity and criticality develop over time as professional development, some components of which turned out to be related to both constructs are subject to change and increase over time. This is probably why professional development or part of it can predict EFL teachers' reflective teaching and critical thinking. Last, but not least, the findings suggest that we should not be expecting reflective teaching and critical thinking to develop and flourish overnight since they seem to develop over time parallel with teachers' professional development especially the development of their pedagogical knowledge.

One point of caution concerning the limitations in carrying out this study is due, and it relates to the relatively small number of participants which somewhat questions the generalizability of the findings. Therefore, further studies with sufficient numbers of participants will be needed to ascertain the generalizability of the findings. Also, including such moderating variables as gender, years of teaching experience, and teacher attitudes can make the study stronger in design and wider in scope.

## References

- Abdar, S., & Shafaei, A. (2022) The relationship between EFL teachers' reflective thinking and their teaching style in the Iranian EFL context. *Reflective Practice*, 23(5), 1-13 DOI: 10.1080/14623943.2022.2086534
- Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education*, 20(2), 107-128.
- Black, G. L. (2015). Developing teacher candidates' self-efficacy through reflection and supervising teacher support. *Education*, 21(1), 78-98.



- Campbell, L. M. (2000) *The unspoken dialogue: Beliefs about intelligence, students, and instruction held by a sample of teachers familiar with the theory of multiple intelligences* [Unpublished doctoral dissertation]. The Fielding Institute, United States.
- Choy, S. C., & San Oo, P. (2012). Reflective thinking and teaching practices: A precursor for incorporating critical thinking into the classroom? *International Journal of Instruction*, 5(1), 167-182.
- Choy, S. C., Yim, J. S., & Tan, P. L. (2017). Reflective thinking among pre-service teachers: A Malaysian perspective. *Issues in Educational Research*, 27(2), 234-251. <https://www.iier.org.au/iier27/choy.HTML>
- Clarke, M., & Otaky, D. (2006) Reflection on and in teacher education in the United Arab Emirates. *International Journal of Educational Development*, 26, 111-122. <http://dx.doi.org/10.1016/j.ijedudev.2005.07.018>
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Health & Co Publishers.
- Facione, P. A. (2006). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction*. The California Academic Press.
- Gellin, A. (2003). The effect of undergraduate student involvement on critical thinking: A meta-analysis of the literature 1991-2000. *Journal of College Student Development*, 44(6), 746-762.
- Griffiths, V. (2000). The reflective dimension in teacher education. *International Journal of Educational Research*, 33, 539-555. Retrieved from. [http://dx.doi.org/10.1016/S0883-0355\(00\)00033-1](http://dx.doi.org/10.1016/S0883-0355(00)00033-1).
- Khodabakhshzadeh, H., & Ghaemi, H. (2011). The role of critical thinking in IELTS instructors' teaching success. *World Journal of English Language*, 1(2), 52-70.
- Khodabakhshzadeh, H., Garmabi, H., & Fayendari, M. B. (2017). Exploring the relationship between burnout and critical thinking skills among Iranian university professors teaching TEFL. *International Journal of Applied Linguistics and English Literature*, 6(7), 261-267.
- Kuhn, D. (1999). A Developmental Model of Critical Thinking. *Educational Researcher*, 28, 16-46. <https://doi.org/10.3102/0013189X028002016>
- Ma, J., & Ren, S. (2011). Reflective teaching and professional development of young college English teachers from the perspective of constructivism. *Theory and Practice in Language Studies*, 1(2), 153-156.
- Mahmoodi-Shahrehabaki, M., & Rajabi-Kondlaji, M. R. (2015). Investigating the associations between English language teachers' reflectiveness and teaching experience. *International Journal of Languages Education and Teaching*, 3(1), 256-272.
- Mermelstein, A. D. (2018). Reflective teaching as a form of professional. *MEXTESOL Journal*, 42(4), 1-14.
- Mousapour Negari, G., & Beiranvand, Z. (2013). Investigating Iranian EFL teachers' reflective teaching and their critical thinking abilities. *International Journal of Science and Research (IJSR)*, 4(3), 776-782.
- Noormohammadi, S. (2014). Teacher reflection and its relation to teacher efficacy and autonomy. *Procedia-Social and Behavioral Sciences*, 98, 1380-1389. DOI: 10.1016/j.sbspro.2014.03.556
- O'Hare, L. O., & McGuinness, C. (2009). Measuring critical thinking, intelligence, and academic performance in psychology undergraduates. *The Irish Journal of Psychology*, 30(4), 123-131.

- Parsi, G. (2017). The relationship between EFL teachers' critical thinking and use of motivational strategies. *Advances in Language and Literary Studies*, 8(2), 14-21.
- Parsi, G., & Ashraf, H. (2020). The Relationship among EFL teachers' critical thinking, professional identity, and teaching experience. *Journal of Applied Linguistics and Language Research*, 7(1), 144-154.
- Pollard, A., Collins, J., Simco, N., Swaffield, S., Warwick, P. (2008). *Reflective teaching: Evidence-informed professional practice*. (3rd ed.) Continuum International Publishing Group.
- Rahnama, S., Abdolrezapour, P., & Ayatollahi, M. A. (2016). The effect of reflective teaching practice on Iranian EFL learners' complexity, accuracy, and fluency of oral speech. *Journal of Applied Linguistics and Language Research*, 3(7), 240-250
- Riyanti, D. (2021). Teacher professional development through reflective teaching. *Journal of English Teaching and Research*, 6(2), 101-110.
- Schön, D. A. (1983) *The Reflective Practitioner: How professionals think in action*. Basic Books Publisher.
- Sharifi, S., & Abdolmanafi Rokini, J. (2014). The effect of reflective teaching on pre-service teachers' learning and teaching development in a learner-centered situation. *International Journal of Language Learning and Applied Linguistics World*, 5(4), 49-58.
- Soodmand Afshar, H., & Farahani, M. (2015). Reflective thinking and reflective teaching among Iranian EFL teachers: Do gender and teaching experience make a difference? *Elsevier, Procedia: Social and Behavioral Sciences*, 19(2), 615-620.
- Urzua, A. & Vasquez, C. (2008). Reflection and professional identity in teachers' future-oriented discourse. *Teaching and Teacher Education*, 24, 1935-1946.
- Watson, G., & Glaser, E. (1980). *Watson-Glaser critical thinking appraisal*. Psychological Corporation.
- Watts, M. & Lawson, M. (2009). Using Meta-analysis activity to make critical reflection explicit in teacher education. *Teaching and Teacher Education*, 25, 609-616.