THE INFLUENCE OF EFL TEACHERS' SELF-EFFICACY, JOB SATISFACTION AND REFLECTIVE THINKING ON THEIR PROFESSIONAL DEVELOPMENT: A STRUCTURAL EQUATION MODELING

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ABSTRACT

This research intended to examine the influence of English as a Foreign Language (EFL) teachers' self-efficacy, job satisfaction, and reflective thinking on their professional development. Two-hundred and twelve Iranian EFL teachers from different universities, language institutes, and schools participated in the research. They were requested to answer Teachers' Sense of Efficacy Scale, The Minnesota Satisfaction Questionnaire, Reflective Thinking Scale, and Professional Development Questionnaire as the main data collection instruments. The questionnaires were submitted in three different ways: email, social networks and in person. Structural Equation Modeling on SPSS AMOS version 24 was employed to examine the hypothesized model of relationships. This model was confirmed following the application of the modification indices suggested by the software (Normal chi-square=3.6; RMSEA=.03; RMR=.02; GFI =.93; AGFI=.90; NFI=.92; CFI=.93; IFI=.93). The findings showed significant internal correlations between all the latent variables along with their sub-scales. Furthermore, multiple regression analysis showed that self-efficacy and job satisfaction positively predicted professional development, with self-efficacy exerting more predictive power compared to job satisfaction. It was further found that not only did reflective thinking not predict professional development, but, conversely, it was partly predicted by professional development. Pedagogical implications of the study have been discussed.

KEYWORDS

HOW TO CITE

Highlights

- *Self-efficacy has the highest impact on professional development compared to two other variables, namely job satisfaction and reflective thinking.*
- *EFL teachers' job satisfaction is a weak predictor of their professional development.*
- *Despite the hypothesized model, reflective thinking does not affect professional development; rather it is influenced by it.*
- *There is a significant positive association between EFL teachers' self-efficacy, job satisfaction and reflective thinking.*

INTRODUCTION

Teachers, as one of the determining factors in achieving the educational objectives, play a key role in every educational system. They have a critical duty in shaping and modeling habits, customs and, above all, the personality of the students. In accordance with Brosh (1996), efficient English as a Foreign Language (EFL) teachers concentrate on improving students' understanding, are in control of the language, provide

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attractive issues, assist students to be autonomous, and use effective strategies in teaching. On the other hand, literature abound theoretical as well as empirical investigations which indicate that there are various factors that can influence the professional development of the teachers (e.g. Ashraf and Kafi, 2017; Lu et al., 2017; Majidinia, 2018; Marcelo, 2009; Mostofi and Mohseni, 2018; Novozhenina and López Pinzón, 2018). This implies that the teaching profession in general and EFL teaching in particular can be considered as a complex issue where a variety of interdependent variables play a role.

Further, EFL teachers' quality of teaching depends on a number of personal and social characteristics, and if these characteristics are not well developed, it can exert negative influence over the educational system and its outcome. Among the most important characteristics regarding teachers is *self-efficacy*. Self-efficacy of teachers has two dimensions: *self-efficacy of teaching*, namely, the teachers' thought in their skills in teaching and the *general self-efficacy*, which refers to his ability to influence and overcome the background of the students, which in turn is supposed to affect learners' academic achievement (Koehler, 2006).

The second characteristic of the EFL teachers, which is extensively discussed in the literature and is expected to influence their career success, is *job satisfaction*. There is a wide range of research in organizational psychology that considers the strong association between job satisfaction of the teachers and the quality of their instruction (Landsman, 2001; Rahman et al., 2014; Seashore and Taber, 1975). Having a job as one of the determinants of social health is an important part of people's life. Consequently, job-related conditions and job satisfaction have become one of the essential elements for promoting health and life satisfaction. It concerns the extent to which the job is responsive to the teacher's needs, abilities and personality traits.

Another key element which has a very crucial task in the language teachers' professional development is *reflective thinking*. In fact, for some researchers like Underhill (1986), teacher professional development is a self-reflective process of being the best kind of teacher that a person can be. There is almost a general agreement that reflectivity results in professional development and that without systematic reflection, professional development is unlikely to occur (Wildman et al., 1990). Nunan and Lamb (1996) claimed that teachers' reflection on their teaching and on the process, developing knowledge and theories of teaching play a pivotal role in this lifelong process. Reflection is also considered as a process that can support teaching, understanding and learning and has a main role in the professional development of teachers.

The fourth characteristic of the EFL teachers, which has received extensive attention in the literature, is *professional development* (PD). As Kyndt et al (2016) stated, teachers should develop their skills, knowledge and other qualifications regarding new needs and findings in the field of teaching. This is related to changes in teacher recognition, professional attitude and educational knowledge. Professional development is an early mechanism that educational systems can employ to help teachers continuously improve their skills.

EFL teacher's quality of teaching depends on a number of personal and social characteristics, and if these characteristics encounter problems, it can exert negative influence over the educational system and its outcome. This might be the reason why PD has been extensively studied and many efforts have been made to find different factors influencing the construct (e.g. Ashraf and Kafi, 2017; Day, 1999; Lu et al. 2017; Majidinia, 2018; Mostofi and Mohseni, 2018; Muhammed Amanulla and Aruna, 2014; Novozhenina and López Pinzón, 2018). There are several reasons why teachers should be involved in effective PD, with the primary purpose of improving teacher and student performance. Harnett (2012) investigated the idea that there is increasing importance in the role of teacher with regard to student success. If teachers can effectively learn new skills and promote their careers, they would see its benefits in their students' achievements.

Keeping the four above-mentioned variables into consideration, variations in possible interrelationships among these teacher variables are quite likely to influence the outcome of an educational program and hence need to be widely explored. Put differently, since effective teachers are fundamental to the achievement of educational goals and objectives, exploring factors influencing the professional development of EFL teachers in particular can be quite illuminating. Nevertheless, to the best of the authors' awareness, not many researches have been carried out to explore the association between factors such as teacher self-efficacy, job satisfaction and reflective thinking and their influence on professional development particularly using structural equation modeling and the few existing studies have explored and examined the effect of these factors in isolation.

LITERATURE REVIEW

This section is purporting to present an overview of the theoretical underpinnings of the study as well as the empirical research conducted about the four latent variables under investigation, namely EFL teachers' self-efficacy, job satisfaction, reflective thinking and professional development.

Self-Efficacy

Teachers' self-efficacy is defined as the degree to which the teachers think they can influence the behavior and academic success of students (Berman et al., 1977). The concept of self-efficacy derived from cognitive-social theory and the works of the well-known psychologist Albert Bandura, who defined self-efficacy as people's beliefs or judgments about their ability to successfully perform duties and responsibilities. Self-efficacy does not refer to skills, but to the belief in the ability to do work in different job positions. Skills can easily be affected by hesitation, resulting in people that are very susceptible to lower self-esteem in situations where they have a weak belief in themselves (Bandura, 1977). Investigators have argued that people with higher degree of self-efficacy focus on wider career opportunities and have more job prospects; they have higher personal goals and better mental health. Self-efficacy can also increase mental health and ability to do things and make people more resistant to job stress (MirSami and Ebrahimi Ghavam, 2007).

Bandura (2006) believes that self-efficacy in the first place is a belief and then action; therefore, to strengthen it, one should first and foremost create an effective attitude toward oneself. Then he should be instructed to identify ways to succeed; to be aware of situations, perceptions, interpretations and evaluations, and to have a positive mood to face the challenges. Individuals who are confident about their capabilities consider problems as challenges that must be dominated, rather than threatened and avoided. They will choose to challenge goals and will all remain committed to doing it. They will be confident to control threatening situations, reducing their perception of stress and depression.

In the same vein, Bandura (2008: 32) argued that having knowledge and skills is one thing and 'being able to use them well and personal accomplishments require not only skills but self-beliefs of efficacy to use them well. For this reason, people with similar constituent skills, may perform differently depending on their self-efficacy beliefs'.

According to Koehler (2006), for a long time, many researches have been conducted on the self-efficacy of instructors and several tools have been designed to measure this concept. Tschannen-Moran and Woolfolk Hoy (2001), succeeded in designing teachers' sense of efficacy scale (TSES). Studies have shown that this scale has a fixed and unitary structure for measuring self-efficacy and takes *educational approaches*, *classroom management*, and *student engagement* into account. The three-factor structure of this scale provides useful information about the self-efficacy of a teacher. The most remarkable critique on this scale is that it does not measure the general self-efficacy of teaching (Koehler, 2006). Koehler designed a set of questions that measured the general self-efficacy of teaching, in conjunction with the design of a tool that comprehensively measures teacher's self-efficacy and added them to the "teacher's Sense of Efficacy Scale". Factor analysis has shown that the questions about two dimensions of self-efficacy for "educational approaches" and "class management" are complete and efficient.

The construction of self-efficacy scales led to the emergence of a number of empirical researches in the academic fields, which set out to investigate how this variable is vital in students' achievement (e.g. Chýlová and Natovová, 2013; Köseoğlu, 2015; Meral, Colak, and Zereyak 2012; Natovová and Chýlová, 2014) and teacher' effective teaching (e.g. Babaei and Abednia, 2016; Malmir and Mohammadi, 2018; Rahimi and Weisi, 2018; Rots et al., 2007). Babaei and Abednia (2016) investigated the association between teachers' self-efficacy and reflective teaching. Two questionnaires were distributed among 225 Iranian EFL teachers. Data analysis showed a significant positive association between the factors of teachers' self-efficacy and reflectiveness. The results of multiple regression determined Efficacy for Learner Engagement as the only predictor of teacher reflectiveness and Meta-Cognitive Reflection as the only predictor of teacher self-efficacy. Using Structural Equation Modeling, most of the sub-scales of both variables were significantly correlated, some were not, and Cognitive Reflection and Efficacy for Classroom Management had a negative association.

Rahimi and Weisi (2018) conducted a study to investigate the relationships among EFL teachers' self-efficacy and reflective practices. The findings of multiple correlation analyses indicated significant positive relationships between these two variables. In another research related to teachers' self-efficacy, Malmir and Mohammadi (2018) set out to find out whether the EFL teachers' self-efficacy and reflective thinking can predict their professional development. The results proposed that if EFL teachers improve their reflective thinking and self-efficacy, they will have higher professional development.

Job Satisfaction

It is necessary to mention that the real aspects of job satisfaction that make people leave their jobs are different and vary according to the experience of people in the organization. The level of job satisfaction is influenced by a wide range of factors related to the internal and external factors of the individuals. It is primarily influenced by the internal organizational environment, which includes organizational climate, leadership style and personnel relationships (Seashore and Taber, 1975). Therefore, recognizing the needs, motivations, and tendencies as well as factors of satisfaction and dissatisfaction of teachers is not only necessary, but also for the adoption of proper policies, appropriate strategies and effective programs are essential. Job satisfaction has widely been considered as an effective factor for increasing the efficiency and success of teachers. Teachers as the most important side of the educational system should be interested in their work in order to develop their potential talents.

Hollyene (2007) conducted a research to find out the Predictors of Teachers' Job Satisfaction. The results revealed that teachers' main concerns about job satisfaction revolved around the issues such as facilities, time, and resources, and to some extent around the professional development. Later, Rahman et al. (2014) investigated the role of job satisfaction in association with organizational citizenship behavior and self-efficacy. The findings revealed that when teachers have high self-efficacy, they also have high job satisfaction and, as a result, have better citizen behavior than others.

Errhouni (2017) conducted a study to investigate the relationship between self-efficacy and job satisfaction. The findings proposed that self-efficacy has a positive relationship with job satisfaction. In another study, Karabiyik and Korumaz (2014) aimed to find the relationship between teachers' self-efficacy perceptions and job satisfaction level. The results revealed that there is a positive and significant relationship between teachers' self-efficacy perceptions and job satisfaction level. Türkoğlu, Cansoy and Parlar (2017) attempted to examine the relationship between teachers' self-efficacy and their job satisfaction. Regarding the results, teachers' self-efficacy correlated positively with job satisfaction. It indicated that an increase in teachers' perceptions of self-efficacy will heighten their job satisfaction.

Bilač and Miljković (2017) conducted a study to examine the effect of reflective practice on the level of job satisfaction after a professional training. The findings did not represent an effect for reflective practice on job satisfaction. Demirdag (2015) conducted a study to examine the relationship between self-efficacy and job satisfaction of middle school teachers.

The findings indicated that there is non-significant negative correlation between teacher self-efficacy and job satisfaction. Landsman (2001) found that job satisfaction significantly influenced commitment. Results of the study confirmed that employee satisfaction significantly predicted employee job engagement. Therefore, it was concluded that teachers' job satisfaction helps their commitment.

Last, but not the least, Bhat (2018) carried out a research on the role of gender differences (male and female teachers) and various types of school (public and private) on teachers' job satisfaction. Findings revealed that there was no significant difference between male and female teachers as well as public and private teachers regarding their job satisfaction.

Reflective Thinking

Reflective thinking has a close association with metacognitive reasoning, through which an individual examines his/her reasoning procedure and recognizes his/her thinking conduct. In reflective thinking, the individual ponders over his/her reasoning and learning styles. Also, reflective and metacognitive thinking require building up an association with past encounters, to make inquiries about the information learned, and to make inquiries of him/her in the learning process. Moreover, reflective thinking is an ability which can be shown in parallel with the improvement in person's self-control forms.

Albeit many endeavors in the domain of English language teaching have been centered on reflective thinking, the researchers observe a lack of focus on the relationship between efficacy of classroom management and reflective thinking especially in EFL setting. According to Posner (1985), examination on teachers' reflective thinking enables us to act in purposeful and deliberate courses, to devise better approaches for instruction. Zalipour (2015: 4) argues, 'Reflective practice challenges teachers who have unquestioned assumptions about good teaching, and encourages them to examine themselves and their practices in the interest of continuous improvement'. Concerning the empirical studies, Baleghizadeh and Javidanmehr (2015) intended to investigate whether EFL teachers' reflectivity and its main components are capable to predict those teachers' sense of self-efficacy. The results of multiple regression analysis showed the predictive power of reflectivity and its sub-scales on teachers' self-efficacy.

Mirzaei, Aliah Phang, and Kashefi (2014) conducted a study to specify the ways to increase teachers' reflective thinking skills. They compared reflective thinking skills between experienced and inexperienced teachers in different levels. They concluded that utilizing reflective thinking tools is an important way to improve reflective thinking skills of teachers.

Noormohammadi (2014) conducted a research to investigate the association between EFL teachers' efficacy and their reflection as well as the association between different components of self-efficacy and reflection by means of a new English language teacher reflective inventory. The findings revealed that there was a significant positive association between teachers' self-efficacy and reflective practice; also self-efficacy had positive association with reflection elements. According to the results, reflection increases job satisfaction and assists teachers to improve their confidence and independence in determining the policy of school or institutes.

There are different characterizations of reflective thinking, among which Choy and Oo's (2012) scientific categorization has been widely acknowledged. Reflective thinking in this characterization incorporates four measurements: (1) reflection as retrospective analysis (Ability to self-evaluate); (2) reflection as problem solving (Awareness of how one learns); (3) critical reflection of self (creating nonstop personal development); (4) reflection on beliefs about self-efficacy. Taking these four measurements together, one can presume that reflective teachers are increasingly mindful about the current circumstance and they are progressively arranged to make a move in critical circumstances, for example, confronting a problematic conduct and upgrading discipline in the classes. Larrivee and Cooper (2006) stated that reflective teachers give a great deal of time to considering classroom cooperation, guidance and management and think about both the proposed and also the unintended outcomes of activities. Using a structural equation modeling technique, Choy, Yim and Tan (2017) studied a reflective thinking model among teachers using 1070 pre-school teachers in Malaysia. The findings showed that reflective thinking leads to teachers' self-efficacy, evaluation and instructional awareness.

Professional Development

Teachers' professional development (PD) is viewed as a procedure that should be developed in the universities, schools and institutes. Besides, it is viewed as a contribution to the development of their professional skills, using different experiences. Teachers' professional development is a very expanded area of study. Therefore, in this section, the researcher tried to demonstrate some of its general and related ideas. Day (1999: 4) believed, 'Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school, which contribute, through these, to the quality of education in the classroom'.

There are many empirical studied in the field of teachers' professional development (e.g. Ashraf and Kafi, 2017; Lu et al., 2017; Majidinia, 2018; Mostofi and Mohseni 2018; Muhammed Amanulla and Aruna, 2014; Novozhenina and López Pinzón, 2018; Suchánková and Hrbáčková, 2017; Uştuk and Çomoğlu, 2019). Ashraf and Kafi (2017) attempted to find out the relationship between Iranian EFL instructors' professional development and their philosophy of education. More specifically, it aimed to explore whether EFL teachers' philosophy of education sub-scales can be seen as some significant predictors of their professional development. After analyzing the data, the findings showed that "Perennialism" as one of the philosophies of education sub-scales was believed to have the significant association with Iranian EFL teachers' professional development as well as becoming the only significant predictor of the professional development.

Majidinia (2018) intended to examine the association between teachers' PD and their emotional intelligence. The results demonstrated that there was a positive and significant association between these two constructs. Novozhenina and

López Pinzón (2018) intended to improve the teaching practice and self-reflection of EFL teachers by means of a professional development program. The results showed that even though the program initiated little changes in the performance and reflection of teachers, it still left space for more improvement and training.

Muhammed Amanulla and Aruna (2014) conducted a research to identify the impact of teacher efficacy on professional development of higher secondary school teachers. The results revealed that there was a significant and positive relationship between teachers' efficacy and their professional development. Lu et al. (2017) evaluated the effect of Teacher Professional Development Programs on Students' Achievement in China. They found no effect for professional development on students' achievement. In fact, the findings revealed that teachers may have enhanced their teaching knowledge from Professional Development Programs, but did not use what they learned to enhance students' learning or teaching practices. Mostofi and Mohseni (2018) set out to investigate the influence of classroom management types (authoritative, democratic, and laissez-faire) on professional development of Iranian EFL teachers. The findings revealed that type of classroom management style had a significant influence on teachers' professional development. The results also indicated that all three class management styles had a significant influence on teachers' professional development.

PURPOSE OF THE STUDY

Taking the above-mentioned critical factors into account, it is quite wise to assume that having effective teachers in order to achieve the objectives of an educational program is undeniable. As mentioned above, this research was an effort to examine the association and interaction between three determining aspects of EFL teachers' social cognitive behavior, namely their self-efficacy, job satisfaction and reflective thinking and the influence of these variables on professional development. This can be quite innovative in the sense that previous researches have not considered all these variables in a single study and employing the potential features and outcomes of structural equation modeling and multiple regressions can shed more light on how these teacher variables may interact and influence each other in the way to lead to professional development. Put differently, the present research expanded previously conducted researches using a proposed model of possible associations among the given variables by means of structural equation modeling (SEM). Therefore, a more detailed model (Figure 1) was presented to show the probable association between teachers' self-efficacy, job satisfaction, reflective thinking and professional development.
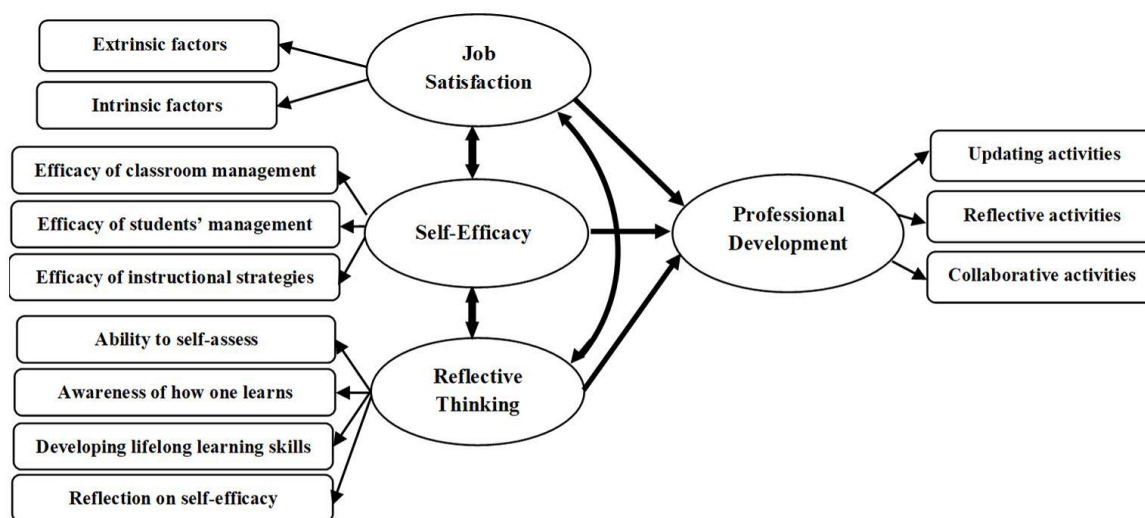

Figure 1: The hypothesized model of the relationships between the variables, 2018-2019

RESEARCH QUESTIONS

In order to achieve the above-stated research purposes, these research questions were posed:

1. Does EFL teachers' self-efficacy have any effect on their professional development?
2. Does EFL teachers' job satisfaction have any effect on their professional development?
3. Does EFL teachers' reflective thinking have any effect on their professional development?
4. Is there any statistically significant association between EFL teachers' self-efficacy and their job satisfaction?
5. Is there any statistically significant association between EFL teachers' self-efficacy and their reflective thinking?
6. Is there any statistically significant association between EFL teachers' job satisfaction and their reflective thinking?

MATERIALS AND METHODS

Context and Participants

The participants consisted of 212 EFL teachers (131 males and 81 females) working in educational centers (universities, schools and language institutes) from 8 different provinces of Iran. It is worth mentioning that totally 334 questionnaires were distributed among the original pool of the participants. Out of this, 193 copies were sent via email and social networks (mainly WhatsApp and Telegram) and the remaining 141 copies

were distributed in paper form. As mentioned previously, 212 teachers filled out the questionnaires and sent them back, which formed the main data for the study. These participants consisted of both novice and experienced teachers with their active working years ranging from 5 to 35. They ranged in age from 25 to 65 with most teachers aging between 30 to 40. Upon distributing the questionnaires, all EFL teachers were introduced to the objectives and importance of completing the questionnaires. The confidentiality of the results of the research was also announced to these teachers in order to participate more confidently.

Instrumentation

To collect the data, four questionnaires were used, namely, (1) Teachers' Sense of Efficacy Scale, (2) Job Satisfaction Questionnaire, (3) Reflective Thinking Questionnaire, and (4) Professional Development Questionnaire.

Teacher Sense of Efficacy Scale (TSES)

Teacher Sense of Efficacy Scale, prepared by Tschannen-Moran and Woolfolk-Hoy (2001), includes 24 items and is divided into three factors: Efficacy of classroom management (8 Items), efficacy of students' management (8 Items) and efficacy of instructional strategies (8 Items). The participants will be asked to report their beliefs on a scale of 1 to 9, with 1 meaning "nothing," 3 meaning "very little," 5 meaning – "some influence", 7 meaning – "quite a bit", and 9 meaning – "a great deal". The reliability of the questionnaire was estimated to be.87.

The Minnesota Satisfaction Questionnaire (MSQ)

The Minnesota Satisfaction Questionnaire was created by Weiss et al. (1967). This scale comprises 20 items and includes two constructs namely *intrinsic satisfaction* with 14 items and *extrinsic satisfaction* comprising 6 items. The respondents are expected to answer on a five-point Likert scale from 1= Very dissatisfied to 5= Very satisfied. The reliability of the questionnaire turned out to be .89.

Reflective Thinking Questionnaire (RTQ)

Teachers' reflective thinking questionnaire designed by Choy and Oo (2012), consists of four areas of reflective thinking: *Ability to self-express* (12 Items), *awareness of how one learns* (9 Items), *developing lifelong learning skills* (9 Items), and *belief about self and self-efficacy* (3 Items). This questionnaire is utilized a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Cronbach alpha was applied to estimate the reliability of the test indicated a reasonable internal consistency among the items (α=.91).

Professional Development Questionnaire (PDQ)

Professional development questionnaire was prepared by De Vries, Jansen, and Grift (2013). This questionnaire consisted of 40 items under three factors: *updating activities* (11 items), *reflective activities* (13 items) and *collaborative activities* (16 items). This was also a Likert-type scale with 1 meaning "Not applicable", 2 meaning "Disagree", 3 meaning "Somewhat applicable", and 4 meaning "Fully

applicable". The reliability of the scale was assessed and approved (α=.88)

Data Collection Procedure

Once the questionnaires were piloted with a group of 26 colleagues, minor modifications were made in the wordings of some items in order to improve their intelligibility. Also, the scores obtained from these participants were fed into SPSS and Cronbach's alpha was computed for the scales (see instruments section above for details) to make sure the scales were sufficiently reliable. It should be mentioned that a group of colleagues in eight different provinces of Iran were contacted and asked to distribute the questionnaires among their own colleagues and ask for their cooperation. As mentioned previously, the questionnaires were delivered to 141 teachers in person and 193 copies were sent via email or social networks (mainly Telegram and WhatsApp). In total, out of 334 teachers contacted, 212 teachers answered the questionnaires and returned them. These questionnaires were scored and the obtained data were fed into SPSS. It is worth mentioning that the negatively worded items were reverse-coded and the necessary preliminary computations were run to prepare the data for the AMOS and test the hypothesized model afterwards.

Data Analysis

Once the data of the study were collected using four different questionnaires related to our latent variables, SEM analysis was run using SPSS AMOS version 24 to test these relationships in the path model. The SEM consists of two main phases: exploratory factor analysis and confirmatory factor analysis. The exploratory factor analysis is employed to examine whether the sub-scales are associated with their own latent variables; this includes some statistical procedures such as KMO-Bartlett Test and Correlational Matrix. Confirmatory factor analysis, on the other hand, aims to validate or confirm the hypothesized model using goodness of fit indices, and examining all the relationships between the latent variables and their sub-scales.

According to Hoyle and Panter (1995), the following fit indices are used to estimate the fitness of the hypothesized model: Normal chi-square, Root Mean Squared Error of Approximation (RMSEA), the goodness of-fit-index (GFI), the incremental fit index (IFI), and the comparative fit index (CFI). As Hoyle and Panter (1995) stated the values of GFI, IFI, and CFI range from 0 to 1.0, with the values closer to 1.0 commonly representing better fitting models. In addition, the loading factors show the high correlation between each latent variable and its sub-scales. In order to demonstrate model path predictions, two statistical analyses such as Spearman bi-variate correlations and multiple regression analysis were conducted.

RESULTS

As mentioned above, a number of statistical procedures were implemented to answer the research questions. Descriptive statistics, correlation matrix, KMO and Bartlett's test, SEM, and Multiple regressions were utilized to serve these purposes. Table 1 shows descriptive statistics for all the sub-scales of the latent variables.

It can be perceived from Table 1 that the continuous variables are not normally distributed (Skewness and Kurtosis < 2), therefore, Spearman bi-variate correlation was used instead of Pearson product-moment correlation in order to compute the interrelation between these variables.

Table 2 presents the correlation matrix of the sub-scales and

Latent Variables	Sub-scales	N	Mean	SD	Skewness	Kurtosis
Self-efficacy	1. Efficacy of classroom management	212	4.14	.46	-.39	-.68
	2. Efficacy of students' management	212	4.04	.35	.11	1.41
	3. Efficacy of instructional strategies	212	4.21	.43	-.13	-.94
Job Satisfaction	4. Intrinsic factors	212	4.14	.36	-.36	.24
	5. Extrinsic factors	212	3.98	.49	-.56	-.21
Reflective Thinking	6. Ability to self-assess	212	3.88	.26	-.27	1.98
	7. Awareness of how one learns	212	3.50	.33	.82	2.79
	8. Developing lifelong learning skills	212	3.72	.32	-.12	-.67
	9. Reflection on self-efficacy	212	4.38	.56	-.80	.08
Professional Development	10. Updating activities	212	3.31	.37	-1.13	2.13
	11. Reflective activities	212	3.24	.40	-.85	1.12
	12. Collaborative activities	212	3.09	.37	-.59	1.95

Table 1: Descriptive statistics for all sub-scales of latent variables, 2018-2019

their related latent variables. As it is clearly represented in table 2, there is a relatively significant correlation between latent variables of the study with the highest correlation between self-efficacy and job satisfaction and their sub-scales. Furthermore, not only are all latent variables of the study strongly related to their sub-scales, but also some of sub-scales are related to other latent variables and sub-scales. As a case in point, self-efficacy is correlated with all the sub-scales of job satisfaction, reflective thinking and professional development. Interestingly, there was a higher correlation between self-efficacy and job satisfaction in comparison with the reflective thinking and professional development.

Variables	Self-efficacy	Classroom management	Students' management	Instructional strategies	Job satisfaction	Intrinsic satisfaction	Extrinsic satisfaction	Reflective thinking	Ability to self-assess	Awareness of how one learns	Developing lifelong learning skills	Reflection on self-efficacy	Professional development	Updating activities	Reflective activities	Collaborative activities
Self-efficacy	1.00															
Classroom management	.86	1.00														
Students' management	.74	.43	1.00													
Instructional strategies	.87	.65	.49	1.00												
Job satisfaction	.64	.60	.49	.51	1.00											
Intrinsic satisfaction	.56	.48	.42	.50	.86	1.00										
Extrinsic satisfaction	.62	.59	.35	.42	.92	.60	1.00									
Reflective thinking	.58	.41	.55	.42	.41	.40	.34	1.00								
Ability to self-assess	.37	.24	.34	.34	.24	.32	.13	.69	1.00							
Awareness of how one learns	.16	.16	.23	.04	.09	.02	.12	.48	.23	1.00						
Developing lifelong learning skills	.45	.43	.20	.44	.32	.32	.26	.63	.42	.26	1.00					
Reflection on self-efficacy	.28	.23	.19	.28	.34	.33	.29	.71	.32	.03	.15	1.00				
Professional development	.61	.50	.48	.54	.52	.49	.45	.35	.28	-.06	.23	.37	1.00			
Updating activities	.58	.49	.40	.54	.31	.32	.24	.29	.28	.02	.28	.19	.83	1.00		
Reflective activities	.51	.44	.41	.42	.61	.52	.56	.38	.24	-.06	.19	.46	.82	.49	1.00	
Collaborative activities	.44	.31	.37	.41	.38	.37	.32	.20	.18	-.12	.11	.26	.85	.60	.54	1.00

Table 2: Correlation matrix for the latent variables and their sub-scales, 2018-2019

Considering the one by one correlation between sub-scales of the study, it can be seen that the highest correlation is between "efficacy of classroom management" under self-efficacy and "extrinsic factors" under job satisfaction (r=.62). On the other hand, the lowest correlation is between "awareness of how one learns" belonging to reflective thinking and "collaborative activities" under professional development (r=-.12). Moreover, all the sub-scales of job satisfaction are significantly correlated with self-efficacy.

Despite multiple relationships between the latent variables and their different sub-scales, simple correlation analysis (due to the measurement errors), cannot be considered as a powerful confirmatory measure. To further approve the relationships among variables of the hypothesized model, both the exploratory and confirmatory analyses of SEM were applied. To meet this objective, Bartlett test was employed to find out whether all of the sub-scales were correlated within themselves and with their own latent variables. It is necessary to mention that finding of the Bartlett test should be significant (p<.05). On the other hand, KMO test was used to assess the adequacy of the sample. This test combines the correlations and partial correlations to see if each sub-scale sufficiently loads on its related factor. The value of KMO test should be between.5 and.9. A small value for KMO (lower than.5) denotes that there is a problem in sampling procedure. Therefore, variables with small values should be removed.

Variables		Self-efficacy	Job satisfaction	Reflective thinking	Professional development
KMO measure of sampling adequacy		.662	.512	.590	.695
Bartlett's test	Approx. Chi-Square	181.100	97.020	86.702	180.554
	df	3.000	1.000	6.000	3.000
	p-value	.000	.000	.000	.000

Table 3: KMO and Bartlett's test, 2018-2019

As can be seen from Table 3, all of the statistics for KMO measure were greater than.5 indicating the sampling appropriateness. Moreover, confidence level of.00 for Bartlett's test verifies the appropriateness of the factor model for all of the latent variables. In accordance with Jöreskog and Sörbom (1996), the goodness of fit indices for the model was evaluated employing maximum likelihood estimation approach in AMOS version 24.

More specifically, these fit indices were used to assess the fitness of the hypothesized model: Normal Chi-square ($\left(\frac{x^2}{df}\right)$< 5), Root Mean Squared Error of Approximation (RMSEA<.05), Root Mean Squared Residual (RMR $\geq$ 0), Goodness-of-Fit Index (GFI>.9), Adjusted Goodness-of-Fit Index (AGFI>.85), Normal Fit Index or Bentler-Bonett Index (NFI>.90), Comparative Fit Index (CFI>.90) and Incremental Fit Index (IFI >. 90). The values of GFI, IFI, and CFI range from 0 to 1.0, with values closer to 1.0, according to Hoyle and Panter (1995), generally representing high and better fitting models. Eight criteria employed to estimate the fit statistics of the model are represented in table 4.

Evaluation	Acceptable level	Current level	Fit statistics
Normal Chi-Square	$\left(\frac{x^2}{df}\right)$< 5)	3.60	Accept
Root Mean Squared Error of Approximation	RMSEA<.05	.03	Accept
Root Mean Squared Residual	RMR≥.00	.02	Accept
Goodness-of-Fit Index	GFI>.90	.93	Accept
Adjusted Goodness-of-Fit Index	AGFI>.85	.90	Accept
Normal Fit Index or Bentler-Bonett Index	NFI>.90	.92	Accept
Comparative Fit Index	CFI>.90	.93	Accept
Incremental Fit Index	IFI>.90	.93	Accept

Table 4: Structural equation model: fit statistics, 2018-2019

According to Table 4, all indices are accepted for the self-efficacy, job satisfaction, reflective thinking and professional development model (Normal Chi-Square=3.6; RMSEA=.03; RMR=.02; GFI=.93; AGFI=.90; NFI=.92; CFI=.93; IFI=.93).

The schematic representation of the modified model, accepted based on the criteria above, is shown in Figure 2. The figure also shows the standardized path correlations between the latent variables as well as their sub-scales.

As represented in figure 2, some positive inter-group correlations exist, the highest of which was between self-efficacy and job satisfaction. The results of the correlation analysis discussed before show different bi-variate relationship between the research measures. However, these bi-variate analyses cannot indicate the influence of one measure on another. Multiple regressions are required in prediction of determining which independent variable accounts for which dependent variable(s).
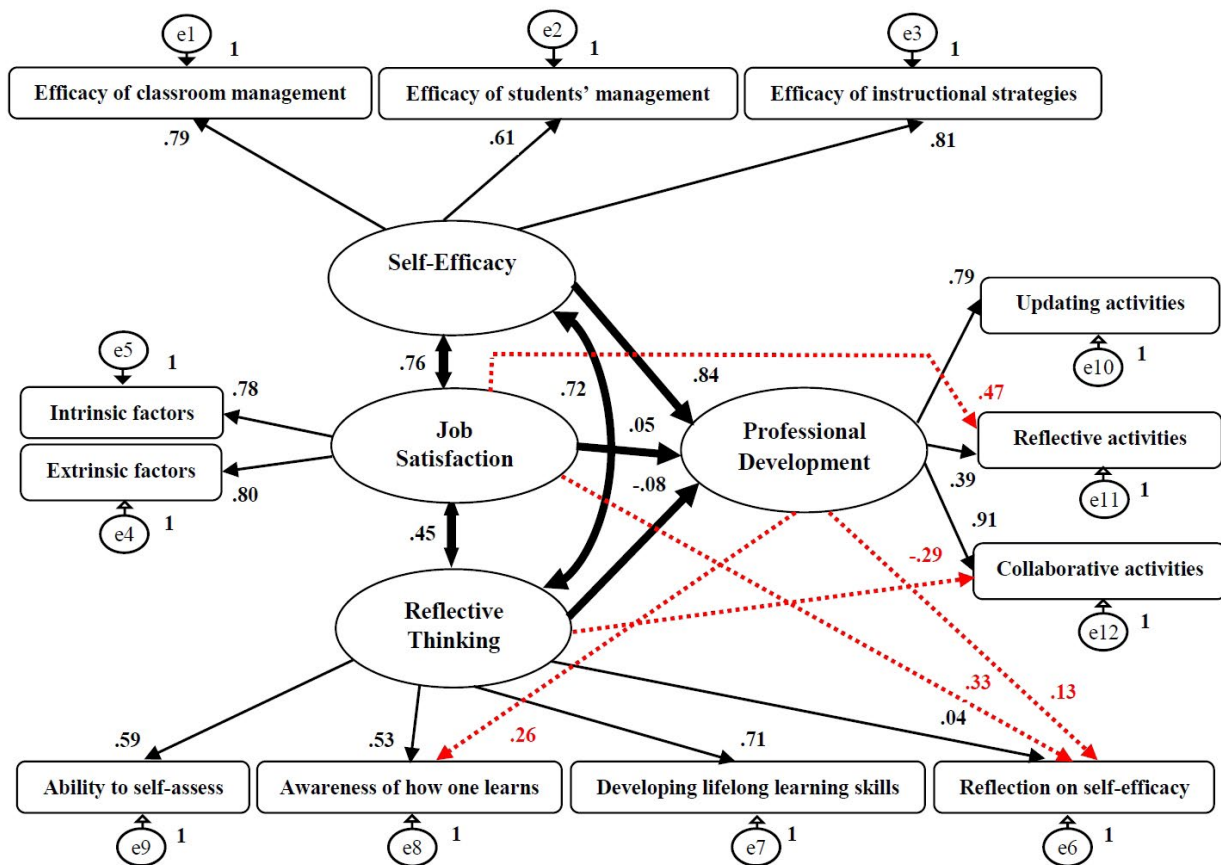
Figure 2: Structural equation modeling in standardized estimates after modification of the hypothesized model, 2018-2019

As Table 5 shows, self-efficacy predicts professional development (*B*=.41, *t*=6.25, *p*-value=.000) more strongly than job satisfaction (*B*=.28, *t*=3.23, *p*-value=.01) and reflective thinking (*B*=.04, *t*=.711, *p*-value=.478). According to independent variables' *B* and *t* values, self-efficacy and job satisfaction are positive predictors of professional development.

Predictor	B	t	p-value
(Constant)	1.506	1.722	.087
Self-efficacy	.716	6.255	.000
Job satisfaction	.684	3.239	.001
Reflective thinking	.044	.711	.478

Table 5: Multiple regression analysis predicting teachers' professional development

DISCUSSION

Using structural equation modeling (SEM), the current research intended to simultaneously explore the interrelationships between three latent variables namely, self-efficacy, job satisfaction and reflective thinking and their influence on professional development. It is worth mentioning that this research extended the previous similar studies through investigating the relationship between above mention variables concurrently and used more accurate analysis techniques.

It was found that, all of the sub scales of the latent variables, namely self-efficacy, job satisfaction, reflective thinking and

professional development were highly correlated with their own latent variables with self-efficacy having the highest correlation with its sub-scales. By applying the SEM, the main results of this research confirmed the hypothesized model of relationship between the principal variables but with some modifications. Among these correlations, the highest correlation related to the teachers' self-efficacy and their job satisfaction. According to the findings, self-efficacy predicts professional development more strongly than job satisfaction and reflective thinking. What follows is intending to examine the relationships of these four variables mentioned above to answer the research questions.

The first research question aimed to examine direct or indirect effect of EFL teachers' self-efficacy on their professional development. The structural equation modeling in standardized estimates illustrated that self-efficacy had the highest effect on professional development (.84) in comparison with other latent variables, i.e., job satisfaction (.05) and reflective thinking (-.08). Furthermore, multiple regression analysis showed that self-efficacy predicts professional development more strongly than job satisfaction and reflective thinking. This finding corroborates Muhammed Amanulla and Aruna (2014), who stated, there was a significant and positive relationship between teachers' efficacy and their professional development. Their results indicated that increase in teachers' efficacy will cause the increase in their professional development and vice versa. Later, Malmir and Mohammadi (2018) conducted another study to find out the effect of

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EFL teachers' self-efficacy on their professional development in which he concluded that EFL teachers' self-efficacy can predict their professional development. He recommended that if EFL teachers improve their self-efficacy, they will have more professional development. It would then be quite wise to assume that EFL teachers with the high degree of self-efficacy enjoy higher degrees of professional development. One probable justification for the results obtained from the previously conducted researches and the present research could be that those teachers who care about the management of their classes and students are determined to update their professional activities and reflect more on their classroom as well as student performance data in order to adjust their teaching and employ the latest findings in terms of instructional strategies. It could also be assumed that those teachers who tend to employ the latest findings in terms of instructional strategies would be more inclined to engage in more collaborative activities with their colleagues to have access to these updates.

The second research question attempted to investigate whether EFL teachers' job satisfaction can influence their professional development. SEM analysis in standardized estimates showed that although the effect reaches statistical significance, it does not have a remarkable effect size. Therefore, it can be stated that although job satisfaction has affected professional development, this effect has been very low (.05). According to the achieved results, it can be claimed that EFL teachers who are satisfied with their job, to some extent, have professional development. As pointed out by SEM analysis, job satisfaction affected one of the sub-scales of the professional development namely, "reflective activities" (.47). Then, after using multiple regression analysis, the results showed that job satisfaction weakly predicted professional development (B=.28, t=3.23, p-value=.01). According to the mentioned results, EFL teachers' job satisfaction has affected their professional development, but it has to be noted that this effect has been negligible. The findings of the current research are in parallel with Hollyene (2007), who conducted a research to find out the Predictors of Teachers' Job Satisfaction in Urban Middle Schools in North Carolina. The results concluded that teachers' main concerns about job satisfaction were revolved around the issues such as facilities, time, and resources, and to some extent around the professional development. On the basis of the findings of Hollyene and the present research, one can infer that teachers who are satisfied with their job are more likely to reflect on the strengths and weaknesses of their teaching. These teachers are more likely to attempt to improve their strengths and desire for more collaborative activities to discuss these strengths and weaknesses with their colleagues and try to improve their professional development. According to the results, teachers who are satisfied with their jobs tend to keep themselves professionally updated by reading newly available materials (e.g. through websites of publishers or brochures or visits of exhibitions on teaching materials), promising practices and educational reforms (e.g. via Internet, television, newspapers), scientific literature and professional journals.

The third research question intended to examine the effect of EFL teachers' reflective thinking on their professional development. Despite the previous research results and predictions that the EFL teachers ' reflective thinking would affect their professional development, the findings of the current study revealed that this effect could only be -.08. Hence, from the results of this research it can be claimed that not only reflective thinking has not affected professional development but also it has been affected by professional development. According to these results, it can be stated that EFL teachers with a high degree of professional development have a high reflective thinking and not the reverse. As showed by structural equation modeling in standardized estimates, reflective thinking affected one of the sub-scales of the professional development namely, "collaborative activities" (-.29) whereas professional development affected two sub-scales of reflective thinking namely, "reflection on self-efficacy" (.13) and "awareness of how one learns" (.26). The correlation matrix of latent variables and their sub-scales also shows that the lowest correlation of this study belongs to relationship between "awareness of how one learns"- as one of the sub-scales of reflective thinking- and professional development (-.06). In addition, multiple regression analysis confirmed the achieved results and revealed that EFL teachers' reflective thinking has failed to predict their professional development (B=.04, t=.711, p-value=.478). The research findings are in contrast to the findings obtained by some previous researches. For example, Wildman et al. (1990) claimed that professional development may not to occur without systematic reflection and then argued that there is general agreement that reflection results in professional development. In another study, Nunan and Lamb (1996) stated that reflective teaching of the instructors is considered as a procedure that can contribute learning and teaching and play a pivotal role in teachers' professional development. Looking at the findings, it can be supposed that teachers who have a higher level of reflective thinking are interested in keeping themselves professionally updated by teaching materials subject matter and studying exercise books and, including manuals. This idea received further support by Mirzaei, Aliah Phang, and Kashefi (2014), who argued that utilizing reflective thinking tools is an important way to improve teachers' reflective thinking skills. So, teachers can use these tools in teaching processes to support their reflective thinking skills. Furthermore, unlike some previous studies, teachers with a higher degree of reflective thinking do not cooperate with other teachers and colleagues, and focus more on individual activities rather than collective and collaborative activities. They don't talk about teaching problems with colleagues and don't share learning experiences with other colleagues.

The fourth research question was about the statistical association between EFL teachers' self-efficacy and their job satisfaction. As it is represented clearly in correlation matrix of latent variables and their sub-scales, there is a rather high positive and significant correlation between self-efficacy and job satisfaction (r=.64). Furthermore, not only these two latent variables but also all their sub-scales are strongly related to each other. On the other hand, SEM standardized estimates revealed that self-efficacy has higher association with job satisfaction (.76). In other words, teachers with higher self-efficacy are expected to be more satisfied with their job. The results of the

present study are in contrast to the results obtained by some previous researches. For instance, Demirdag (2015) in a study indicated that there is non-significant and negative correlation between teacher self-efficacy and job satisfaction. On the other hand, there are more previously conducted studies that confirmed the results of the present research (e.g. Errhouni, 2017; Karabiyik and Korumaz, 2014; MirSami and Ebrahimi Ghavam, 2007; Türkoğlu, Cansoy and Parlar, 2017). Errhouni (2017) stated that self-efficacy has a positive relationship with job satisfaction. This indicated the importance of self-efficacy for increasing job satisfaction. In another study, Karabiyik and Korumaz (2014) argued that there is a positive and significant relationship between teachers' self-efficacy perceptions and job satisfaction level. In a similar report, MirSami and Ebrahimi Ghavam (2007) pointed out that people with higher level of self-efficacy have more job satisfaction. They also claimed that self-efficacy can also increase ability of people to do things and make people more resistant to job stress. In another similar study, Türkoğlu, Cansoy and Parlar (2017) stated that teachers' self-efficacy correlated positively with job satisfaction. These results indicated that when teachers' perceptions of self-efficacy increase, their job satisfaction will also increase. According to the results of this study and above mentioned researches and considering that the highest association was between teachers' self-efficacy and job satisfaction, it can be assumed that teachers with high job satisfaction are more effective in classroom management and can control disruptive behavior in the class. The teachers with high job satisfaction employ better instructional strategies in comparison with other teachers. They employ different kinds of implement alternative strategies and assessment strategies in the classroom to create appropriate challenges for very capable students. The teachers are also more successful in managing the students so that they can motivate students who show low interest in school work. These teachers can respond to difficult questions of students and establish routines to keep activities running smoothly.

The fifth research question aimed to find the statistical relationship between EFL teachers' self-efficacy and their reflective thinking. The correlation matrix of all latent variables and their sub-scales showed a statistically significant and positive association between EFL teachers' self-efficacy and their reflective thinking (.58). Also, findings of the structural equation modeling in standardized estimates confirmed the results of correlation matrix in which there was a high correlation between EFL teachers' self-efficacy and their reflective thinking (.72). In addition, not only these two latent variables are strongly correlated with each other, but all of their sub-scales are associated with one another. So, it would be wise to assume that teachers with the high degree of self-efficacy would exercise more reflection on their professional career. The findings of the current research are in parallel with the results obtained from some of the studies (e.g. Babaei and Abednia, 2016; Baleghizadeh and Javidanmehr, 2015; Choy, Yim and Tan, 2017; Noormohammadi, 2014; Rahimi and Weisi, 2018). In the first study, Babaei and Abednia (2016) stated that there is a significant positive association between the factors of teachers' self-efficacy and reflectiveness. The results determined Efficacy for Learner Engagement as the only predictor of teacher reflectiveness and Meta-Cognitive Reflection as the only predictor of teacher self-efficacy. Using Structural Equation Modeling, most of the sub-scales of both variables were significantly correlated. In the second related study, Baleghizadeh and Javidanmehr (2015) showed the predictive power of reflectivity and its sub-scales on teachers' self-efficacy. They also showed the correlation between these two components. Moreover, *ethical and critical issues* from sub-categories of reflectivity had the highest contribution in this prediction. In the third study, Choy, Yim and Tan (2017), using structural equation modeling, investigated a reflective thinking model among teachers in Malaysia; the results revealed that higher degrees of reflective thinking can lead to teachers' higher self-efficacy. These teachers take their past performance into consideration and integrate it with what they are doing in the present to help them better prepare for the future. In the fourth study, Noormohammadi (2014) argued that there was a significant positive association between teachers' self-efficacy and reflective practice; also self-efficacy had positive association with reflection elements. According to the results, reflection increases job satisfaction and assists teachers to improve their confidence and independence in determining the policy of school or institutes. In the last and fifth study, Rahimi and Weisi (2018) indicated that there were significant positive relationships between self-efficacy and reflective practice. These results also showed that self-efficacy positively correlated with all sub-scales of reflective practice. Moreover, reflective practice positively correlated with all sub-scales of self-efficacy. According to the results of the present study and above mentioned studies, it could also be assumed that teachers with the high degree of reflective thinking could establish a better classroom management, gauge students' understanding of what they have taught and provide appropriate challenges for more capable students.

The last and sixth research question targeted the statistical association between EFL teachers' job satisfaction and their reflective thinking. According to the findings of correlation matrix of all latent variables and their sub-scales, EFL teachers' job satisfaction is positively correlated with their reflective thinking. Further, the achieved results of the correlation matrix are confirmed by the structural equation modeling in standardized estimates (r=.45). Although the number obtained for the association between job satisfaction and reflective thinking has been the lowest in this study, it can still be claimed that this relationship is positive and statistically significant. It means that teachers who are satisfied with their job are more likely to enjoy higher degrees of reflective thinking. As reported by structural equation modeling in standardized estimates, job satisfaction affected one of the sub-scales of the reflective thinking namely, "reflection on self-efficacy" (.33). One possible reason for these findings could be that those teachers, who are satisfied with their job, tend to develop lifelong learning skills more than unsatisfied teachers. It could also be assumed that these teachers try to reflect on what they do during their lessons so that this can enrich the strategies they use with new and more effective ones. On the other hand, satisfied teachers prefer to follow orders rather than being innovative because they don't want to get in trouble

and try to look for areas of connectivity between what and how they teach with their life experiences. According to the results, those teachers who are more satisfied with their job always assess the strengths and weaknesses of their teaching and have a higher degree of self-assessment and self-efficacy. These findings are in contrast with the results of Bilač and Miljković (2017), whose findings did not represent any effect for reflective practice on job satisfaction of lower elementary and subject teachers.

CONCLUSIONS AND IMPLICATIONS

Effective teachers have a pivotal role in the performance and success of educational systems and different psychological and sociological factors can influence their success and failure. For this reason, the present research intended to investigate four important factors influencing the performance of EFL teachers. More specifically, it aimed to investigate the interaction and relationship between three determining aspects of EFL teachers' behavior, namely self-efficacy, job satisfaction and reflective thinking and their influence on professional development. Two-hundred and twelve Iranian EFL teachers from different universities, schools, and language institutes participated in the research. As the main data collection instruments, four questionnaires were submitted to the participants in three different ways: email, social networks and in person and they were requested to complete and send them back. Structural Equation Modeling on SPSS AMOS version 24 was employed to examine the hypothesized model of relationships. The present research has two phases; the first part is related to the effect of EFL teachers'self-efficacy, job satisfaction and reflective thinking on their professional development, and the second part concerned the association between EFL teachers'self-efficacy, job satisfaction and reflective thinking. The conclusion, accordingly, is divided into two sections touched upon below.

Concerning the first phase, the results showed self-efficacy has the highest impact on professional development as compared to two other variables, namely job satisfaction and reflective thinking. Put differently, self-efficacy predicted professional development more strongly than job satisfaction and reflective thinking. As a result, it could be assumed that teachers with the high degree of self-efficacy have higher professional development.

The findings of the current study also showed that although in the hypothesized model of the study, it was predicted that job satisfaction can affect their professional development, the findings suggested that this effect can be extremely low. This means that EFL teachers satisfied with their job are more likely to slightly enjoy professional development.

It was also found that job satisfaction has an impact on "reflective activities", as a sub-scale of professional development. So, it can be concluded that job satisfaction of EFL teachers can influence their professional development though in a very small scale.

Also, regarding the findings, not only has reflective thinking not affected professional development, but reversely was affected by it. Therefore, it can be argued that teachers with the high degree of professional development have higher reflective thinking and not necessarily the other way round.

In the case of second part of the conclusion, which is related to the association between EFL teachers' self-efficacy, job satisfaction and reflective thinking, the results revealed that there is a positive and significant association between Iranian EFL teachers' self-efficacy, job satisfaction and reflective thinking. These results highlighted the significant role these variables play in the professional development of the teachers. Put differently, to develop teachers' self-efficacy, it is necessary, to take their job satisfaction and reflective thinking into account and vice versa.

Any language teaching investors or stakeholders, such as educational policy makers, teachers, and researchers might benefit from the findings of this research. Moreover, this study can help educators and administrators to better understand the psychological and sociological aspects of EFL teachers and take measures to remove barriers in this regard and foster the achievement of educational objectives.

As suggestions for future research subsequent studies may be thought of to consider additional latent variables to enrich the results of the present study. Future studies may revise the model'sendogenous variable selection and then examine how self-efficacy, job satisfaction, reflective thinking and professional development might affect these endogenous variables. Also, it would be desirable to continuously study the model results and model fit using the structural equation modeling approach with different groups of teachers. For example, model testing will be useful with teachers of different disciplines or in different fields of studies. Further studies may also replicate the comparison process of this study under different conditions such as teachers of different majors and in different behavioral fields. Such comparisons can add new insights to the development of the EFL teachers.

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