

## Exploring Iranian EFL Teachers' Perceptions of Professional Development: A Qualitative Study with University Teachers in Focus

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**Abstract:** Professional development is considered a must for a teacher without which teachers' knowledge is not up-to-date and he/she cannot provide students with useful and meaningful material. Teachers' professional development plays a vital role in students' achievement. With a view to this, the present study sought to explore Iranian teachers' perceptions of professional development. This study benefited from a basic interpretive design within a qualitative paradigm by using a semi-structured interview. The participants of the study consisted of 50 male and female English as a Foreign Language (EFL) teachers who were teaching English at the university level in the universities located in southern cities of Iran including University of Velayat in Iranshahr, University of Sistan & Baluchestan, Chabahar University of Maritime Sciences, University of Zabol, Islamic Azad Universities, Bandar Abbas branch, Qeshm branch, and Kish branch. They were selected through available sampling. The researcher benefited from a semi-structured interview for data collection. The collected audio-recorded data from the interviews was transcribed verbatim to be analyzed. Finally, the transcribed data was qualitatively analyzed through thematic analysis to extract the recurrent themes. The results of the present study revealed the following EFL teachers' professional development needs as perceived by EFL teachers: Language knowledge, digital competence, content knowledge, evaluation skills, teaching methodology knowledge, verbal skills, critical thinking skills, reflective thinking skills, students' needs analysis, classroom management ability, motivational strategies, and public relations skills. The findings have some implications for teacher educators, teachers, teacher education curriculum planners and researchers.

**Keywords:** Professional development, Professional practice, Professionalism, Professional skills

### Introduction

English language teaching (ELT) has turned into an inevitable phenomenon in today's human life as a consequence of the necessity of English as a foreign language (EFL) learning in the global village. However, ELT is not occurred in the vacuum and is under the effect of various factors among which professional matters can be mentioned. As an important professional matter, professional development of EFL teachers can be mentioned. Being professionally developed is equivalent with being a professional and effective teacher (Rokhyati, 2015). This implies that professional development contributes to teaching effectiveness.

Recently, teachers' professional development has been paid a high volume of heed by scholars ([Gupta & Lee, 2020](#); [Mayahi & Mayahi, 2014](#)). As put by ([Sancar et al., 2021](#)), teachers' professional development is one of the factors which are directed related to students' academic achievement. They are of the belief that teachers' professional development is not unidimensional but it consists of different dimensions which are exposed to some changes during professional life of teachers. In the same vein,

([Gupta & Lee, 2020](#)) considered teachers' professional development and students' learning as significantly correlated.

As a consequence of the important role played by professional development of teachers in students' learning, teachers' professional development has been the subject of several studies in different contexts ([Asempapa & Love, 2021](#); [Sezer, et al., 2019](#); [Smet, 2022](#)). In the study by [Sezer et al. \(2019\)](#), school managers' perceptions of teachers' professional skills were investigated in a qualitative study using semi-structured interview. The following features were enumerated by the managers as professional development needs of teachers: Communicational skills, digital literacy skills, pedagogical content knowledge, planning skills, material designing skills. In an investigation by [Zamani and Ahangari \(2016\)](#), Iranian English language learners' perceptions of professionalism in teaching were addressed using a quantitative scale. As demonstrated by the results, English communicative skills were of a significant role in teachers' professionalism. Iranian EFL teachers' conceptions of professional teaching in EFL contexts were explored in the study by [Shahvand and Rezvani \(2016\)](#). As revealed by the results of questionnaire data, male and female Iranian EFL teachers were the same in terms of their conceptions of professional teaching. The same finding was true about experienced and novice teachers. [Demiroz and Yesilyurt \(2015\)](#) did a comparative study on English students' and teachers' perspectives about a professional language teacher. As uncovered by the results, there were significant differences between students' and teachers' views about professional language teacher. [Moradi and Sabeti \(2014\)](#) sought to investigate teachers' and students' perceptions of teacher effectiveness. In so doing, a descriptive quantitative design was selected using a questionnaire as the instrument of data gathering. The results showed similar perceptions for both groups of the participants.

Apparently, the common approach taken in most of the studies on professional development is descriptive investigation of professional development with the help of questionnaires. In a more particular sense, perceptions of teachers of professional development have not been remarkably addressed by the previous researchers in a qualitative paradigm. In this research paucity, to the best knowledge of the researcher, Iranian EFL teachers' perceptions of professional development need more investigations. Taken this into account, the present study aimed at exploring Iranian EFL teachers' perceptions of professional development. In so doing, the present study aimed at answering the following research question:

**RQ:** What are Iranian EFL teachers' perceptions of professional development?

## **Material and Methods**

This study benefited from a basic interpretive design within a qualitative paradigm by using a semi-structured interview. This type of design provides "descriptive accounts targeted to understanding a phenomenon using data that might be collected in a variety of ways, such as interviews, observations, and document review" ([Ary, et al., 2019](#), p. 29). Given that this study sought to uncover the participants' perceptions of professional development, basic interpretive design was the most appropriate choice. The participants of the study consisted of 50 male and female English as a Foreign Language (EFL) teachers

who were teaching English at the university level in the universities located in southern cities of Iran including University of Velayat in Iranshahr, University of Sistan & Baluchestan, Chabahar University of Maritime Sciences, University of Zabol, Islamic Azad Universities, Bandar Abbas branch, Qeshm branch, and Kish branch. They were selected through available sampling since through this sampling method, the researcher could achieve a reasonably acceptable sample size. Data saturation was achieved with this sample size. They had more than five years of teaching experience. The selected teachers held M.A and Ph.D. degree. Their first language was Persian. To observe the ethical issues, the consent of the participants was taken at the outset of the study. Moreover, they were ensured about anonymity and confidentiality of their personal information. Additionally, they were informed that participation in this study would not affect their current job status in any way.

To collect the data, the researcher used the semi-structured interview in order to get deep interpretation of the participants' perceptions. It consisted of approximately 5 open-ended questions. The interview was conducted online through WhatsApp. Each participant was interviewed individually. All interviews were audio-recorded and transcribed verbatim for the purpose of data analysis. Each interview lasted about 30 minutes. The interview was conducted in English. Data collection of this study started with selecting the sample. Then, the researcher took the interview in the way mentioned above. As stated in the previous paragraph, this interview aimed at uncovering the participants' perceptions of professional development. Next, the collected audio-recorded data from the interviews was transcribed verbatim to be analyzed.

To analyze the data, the researcher qualitatively analyzed the transcribed interview data through qualitative thematic analysis. The thematic analysis was done in four steps. In the first step, the researcher tried to be familiar with the data through taking notes or looking through the data. In the second step, the data was coded. It involved making some phrases and sentences of the text bold and coming up with some codes which represented the content of the bold parts. In the third step, the codes were looked over to identify the recurrent patterns in them. In the fourth step, the extracted themes were reviewed to ensure about their accuracy. To observe the credibility of the results obtained from interviews, the researcher provided direct quotations from interviewees in the process of reporting the results of content analysis. To check the dependability of interview data, member checking was used. That is, the researcher showed some parts of analyzed interviews to interviewees to see whether their perceptions are the same with the extracted themes.

## Results

Through thematic analysis of the transcribed data, the following themes were extracted as teachers' perceptions of professional development:

### 1. Public relations skills

This theme says that teachers should be able to build good communication with students.

As said by teacher 41

*"Teachers should try to build good relationships with students. They should see themselves as friends of students rather than their boss."*

Teacher 18 stated:

*"Having friendly relations with students is an important factor in teaching profession. Rigidity and bad temperedness does not answer in EFL teaching."*

Teacher 10 said:

*"Warm relationships with students contributed to teaching success. Students do not like teachers who stand far from them."*

## **2. Motivational strategies**

According to this theme, EFL teachers should use motivational strategies in English classes.

Teacher 27 said:

*"Teachers should motivate students to learn in every possible way. They can give them rewards, extra scores, and everything which makes them more motivated"*

Teacher 5 discussed:

*"The miracle of motivation both external and internal one should not be neglected by teachers. Without motivation, students have no tendency to learn English."*

Teacher 33 commented:

*"An important mission of EFL teachers is giving motivation to students. With a view to the prevalence of demotivation among students, this is of great importance."*

## **3. Classroom management ability**

According to this theme, EFL teachers should be capable of appropriately managing classes.

According to teacher 49:

*"Professional development cannot be imagined as separate from class management skills. English language teachers should set the time of class so that no part is remained untouched."*

Teacher 38 stated:

*"Being skillful at management of the time of classroom is an element of professional development of teachers. Some teachers devote all the time of class to presentation of instructional materials. This is not accepted. Material presentation is just one aspect of class."*

Teacher 9 said:

*"Class management ability is very important for teachers. Teachers who can manage the time assigned to each class appropriately are more likely more successful than those deprived of such skills."*

## **4. Students' needs analysis**

As expressed in this theme, a part of teachers' professional development is recognition of students' needs.

Teacher 31 said:

*"A good teacher knows that students are diverse in terms of their language needs. That is, teachers should recognize that there is no fit to all prescription which works for all students."*

Teacher 45 stated:

*“A preliminary stage of successful EFL teaching is identification of needs of different students. This is important because needs of students are not the same.”*

As put by teacher 50:

*“Teachers should know what works for each student. A method used for student A may not be really effective for student B. Needs of students are different and recognition of this is important in teaching career.”*

## **5. Reflective thinking skills**

Implication of this theme is that teachers are required to think reflectively if they seek to be professionally developed.

As stated by Teacher 9:

*“Teachers should think about their teaching regularly. In this way, they can identify problems, weak and strong points, and gaps in their teaching.”*

Teacher 47 said:

*“The ability of teachers in thinking reflectively about their work is a big advantage for EFL teachers. Reflectivity plays a great role in teacher effectiveness.”*

Teacher 28 put forth:

*“Teachers need reflective thinking throughout their teaching period. Even experienced teachers need to think reflectively before, during and after teaching about teaching.”*

## **6. Critical thinking skills**

As implied in this theme, critical thinking is a pre-requisite for professional development.

Teacher 35 said:

*“Development in any job including language teaching does not occur in the absence of criticality. Teachers who are proponent of development should be able to question the existing affairs related to their job.”*

Teacher 33 stated:

*“Critical thinking is a feature which plays a key role in professional development. This role is closely related to the tendency to start changes and transformations as a result of being critical.”*

In the words of teacher 17:

*“Acceptance of the existing situation does not lead to growth in teaching EFL. Teachers should identify problems and set out to solve them by critical thinking. In this way, they become near to professional development.”*

## **7. Verbal skills**

The theme of verbal skill says that teachers should be verbally competent to attain professional development.

Teacher 44 said:

*“Teaching and verbal communication are tied closely. Unconsciously, the belief is that teachers with higher verbal skills are more competent.”*

Teacher 21 commented:

*"Teachers capability in verbalization and talking is one of the main features which contribute to their professional development. To convey educational materials, teachers should be able to talk well."*

Teacher 13 said:

*"I think that effective teachers are better talkers than their less effective counterparts. It is by the power of talking that teachers can absorb students to learning."*

## **8. Teaching methodology knowledge**

A theme identified in the sayings of the interviewees was that EFL teachers should have a good command of teaching methods.

According to teacher 7:

*"Professional development of EFL teachers is tied to their knowledge of teaching methods. Since teaching English is a hard task, teachers should know about different teaching methods so that they can select the most appropriate method."*

In the words of teacher 26:

*"Awareness of teaching methods makes teachers a step nearer to professional development. Teaching growth and development truly pass from knowledge about teaching methods."*

Teacher 10 perceived:

*"Professional teachers do not make themselves limited to just one teaching method. They know different teaching methods well and take advantage of a combination of different methods of teaching."*

## **9. Evaluation skills**

From this theme, it is understood that EFL teachers should be competent to evaluate students as a necessary part of professional development.

Teacher 11 said:

*"Professional development is strongly related to assessment competence of teachers. Teachers should take advantage of different assessment procedures to assess students' learning."*

As commented by Teacher 40:

*"Teaching and evaluation are two sides of one coin. Evaluation of the amount of students' learning is a necessary skill for teachers' professional development."*

Teacher 39 stated:

*"Assessment of learners' knowledge cannot be simply dismissed and taken for granted. This is what guides teachers in selecting the appropriate teaching materials and activities."*

## **10. Content knowledge**

According to this theme, content knowledge is a prerequisite for professional development.

As stated by teacher 30:

*"Teachers' knowledge of instructional materials content plays an important role in their teaching success. Teachers should have command of the content of educational materials."*

According to teacher 42:

*"Being knowledgeable in the content of taught materials is of significance for EFL teachers. Content mastery is a characteristic of professional development."*

As mentioned by teacher 18:

*“Teachers cannot achieve professional development if they do not have control over the content of materials which they teach. This makes them more confident in their teaching.”*

## **11. Digital competence**

As commonly perceived by teachers, teachers should be competent in the use of technology in teaching.

As expressed by Teacher 7:

*“Teachers should not be ignorant of the potentials of technological devices in improvement and development of their own teaching. Technology can make teaching profession easier for teachers.”*

Teacher 14 said:

*“Literacy in using CALL and MALL is what distinguishes professional teachers from other teachers. Today, with the advancement of different technological tools, language teaching has taken a considerably different shape.”*

Teacher 20 said:

*“Different technological devices including social networks make the path of professional development shorter for teachers. Teachers who aim to reach professional development should attempt to benefit from technology in teaching.”*

## **12. Language knowledge**

Another professional development need mentioned by interviewees was English language proficiency. They perceived that EFL teachers should have a high English language proficiency. According to teacher 5:

*“The most important professional development need of EFL teachers is English proficiency. To develop professionally, EFL teachers should be proficient in English language.”*

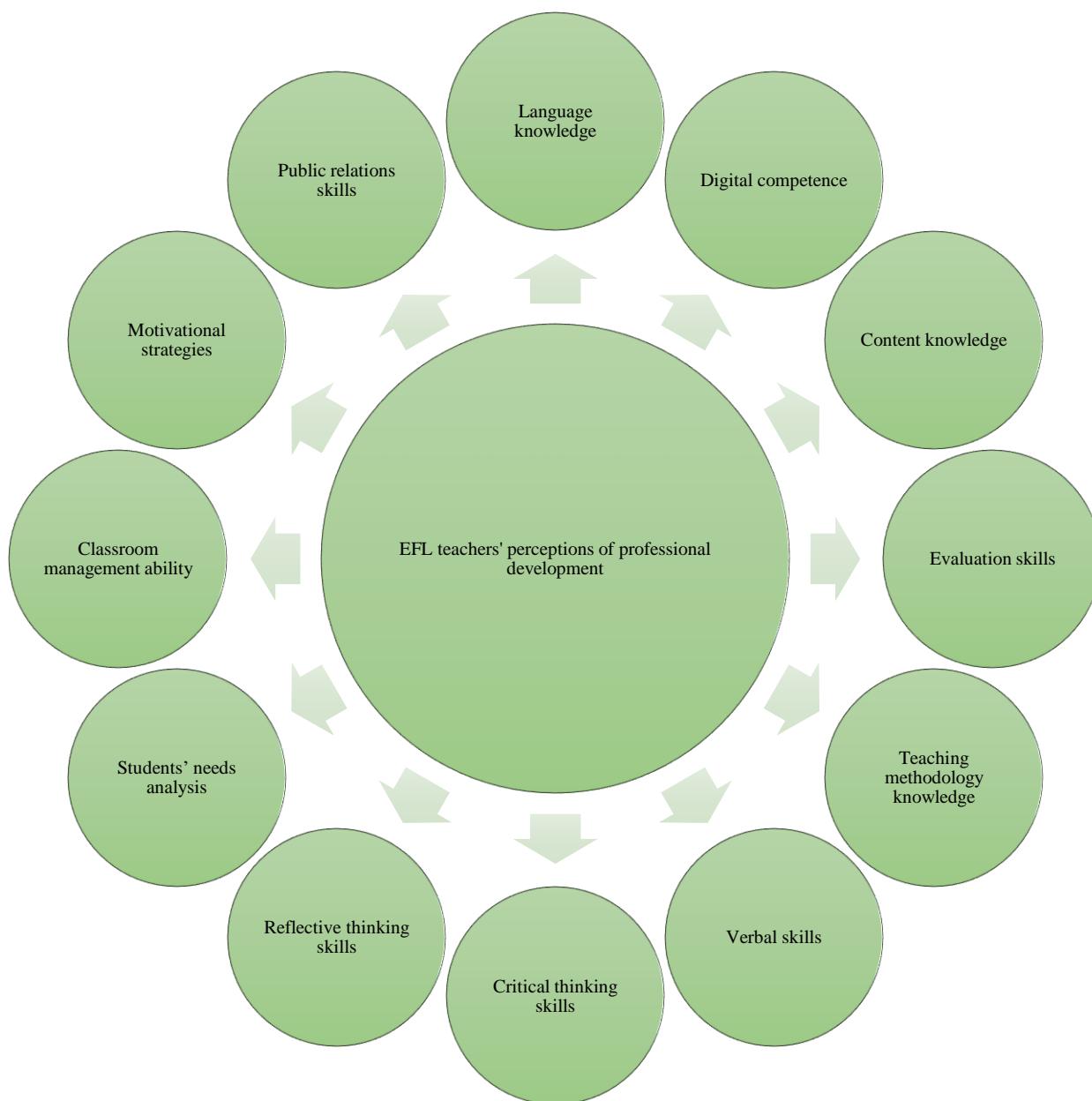
As stated by teacher 31:

*“A thing which plays a significant role in professional development of EFL teachers is knowledge of English language. Professional development is not achieved without language knowledge.”*

As perceived by teacher 10:

*“Teachers’ knowledge of English language is of paramountcy in EFL teaching. Being professionally developed in EFL is not materialized without English language proficiency.”*

The above themes are demonstrated in Figure 1.



**Figure 1.** EFL Teachers' Perceptions of Professional Development

## Discussion

The results of the present study revealed the following EFL teachers' professional development needs as perceived by EFL teachers: Language knowledge, digital competence, content knowledge, evaluation skills, teaching methodology knowledge, verbal skills, critical thinking skills, reflective thinking skills, students' needs analysis, classroom management ability, motivational strategies, and public relations skills.

Consistent with the present study, ([Arfa Kaboodvand, 2013](#)) and Wichadee (2010) found that teachers' interactional skills were considered as important in professional development of teachers as perceived by Iranian teachers. In the same vein, in the research by ([Wichadee, 2010](#)), and Ramos-Rodríguez, Fernández-Ahumada, and Morales-Soto (2022), communicative skills of English teachers were important in teachers' professional development. Furthermore, ([Khojastehmehr & Takrimi, 2008](#)) and Shishavan and Sadeghi (2009) found teachers' communication skills as leading to teacher professional development. Additionally, the findings are in line with Zein' s (2017) research findings and Kaboodvand' s (2013) results which showed that communicative skills, content knowledge, language knowledge and psychological knowledge were among the professional development needs of EFL teachers.

Similarly, motivational skills were conceived as effective in teachers' professional development ([Emmer & Gerwels, 2005](#); [Ghasemi & Hashemi, 2011](#); [Rubio, 2009](#)). The findings are also consistent with Zein's (2016) study wherein communicative skills, content knowledge, and language knowledge were found as the professional development needs of EFL teachers. Furthermore, Kabilan and Veratharaju (2013), and Le and Do (2012) identified language proficiency as a professional development element of EFL teachers. Consistent with the present study, Choy and Oo (2012), Kaneko-Marques (2015), and Silver (2015), referred to the role played by teachers' reflectivity in their instructional change and professional improvement. Moreover, other studies whose findings are confirmed by this study are those by Dibapile (2012), Khany and Ghoreyshi (2013), and Rahimi and Asadollahi (2012) which reported classroom management skills as a professional development pre-requisite among EFL teachers.

In justifying the findings, it can be argued that EFL teaching is a complex phenomenon which requires different kinds of knowledge, skills, techniques and strategies to be a successful job. While learner-centered teaching has recently found its own way into educational settings, teacher role and teacher professional development role cannot be neglected in the game of EFL learning. In fact, different teacher characteristics including personality factors, knowledge, language proficiency, etc. affect their teaching in the classroom. The complexity of EFL teaching is added due to low proficiency level of some learners, their age nature, their emotional states, and such characteristics. It can be said that part of this complexity is related to the matter that some learners regard language learning as a fun and amusement and do not take it seriously. In other words, they do not seek a serious and reasonable goal in learning English, and this makes teacher job more complicated.

According to the findings, it can also be discussed that professional development needs of EFL teachers is not achieved easily due to demanding nature of the job. Although the public view is that EFL teaching

is not that much difficult, reality is something else. In fact, learner characteristics are there to affect EFL learning in different ways. In teaching at some levels, learner maturity is absent, and this is what generates many problems and challenges for EFL teachers.

For instance, although classroom management is big concern for primary EFL learners, is not a difficult task when teaching intermediate and advanced learners. Or emotional involvement of teacher in higher level EFL teaching is not a main concern, however, it is a building block of primary classes. As another example, communication with parents is not common in intermediate and upper classes, but it works positively in primary classes.

### **Conclusion**

Given that professional development is considered as necessary for keeping teachers' knowledge and providing students with useful and meaningful material (Rokhyati, 2015), it can be concluded, based on the findings, that EFL teachers should try to make their teaching methods knowledge, content knowledge, psychological knowledge, assessment knowledge, and language knowledge up-to-date. The other conclusion which can be made from the results is that teaching as a profession is tied to different kinds of knowledge and skills which should be enhanced if teachers seek professional development.

Moreover, it is concluded that EFL teachers should practice different skills including thinking skills, communicative skills, and motivational skills if they want to provide learners with useful instructional practices and materials. Additionally, the results contribute to the conclusion that teacher professional development is a multidimensional notion wherein different factors have a hand. It is contrary to the public opinion that it is language proficiency which contributes to EFL teacher effectiveness.

Last but not least, this conclusion can be drawn that professional development of EFL teachers is not reached overnight and it passes from different channels related to language proficiency, evaluation literacy, communication skills, verbal skills, motivational skills, and classroom management skills, etc. This shows that EFL teachers should acquire different types of knowledge and skills in trying to develop professionally. This is a path wherein teaching experience plays a paramount role. Besides, they can benefit from different available sources such as consultation with their colleagues, team teaching, various in-service teacher education programs, etc.

One pedagogical implication of the results is that teacher educators should try to emphasize and practice the identified needs of professional development when training EFL teachers. The other implication is that teachers should attempt to work on the identified knowledge and skills to reach professional development. The third implication of the results is that teacher education curriculum developers should design EFL teacher education curricula so that the identified knowledge and skill types identified in the present study are enhanced. Last but not least, researchers in the field can explore the issue of EFL teachers' professional development needs taking different characteristics of teachers, including age, teaching experience, etc., into account. Moreover, they can explore the professional development needs of EFL teachers teaching at different levels including primary-level teachers, intermediate-level teachers and advanced teachers.

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## References

Ary, D., Jacobs, L.C., Sorensen, C.K., & Walker, D. (2019). *Introduction to research in education* (9th ed.). Belmont, CA: Wadsworth.

Asempapa, R.S., & Love, T.S. (2021). Teaching math modeling through 3D-printing: Examining the influence of an integrative professional development. *Sch. Sci. Math.*, 121, 85-95.

Choy, S. C., & Oo, P. S. (2012). Reflective thinking and teaching practices: A Precursor for incorporating critical thinking into the classroom. *International Journal of Instruction*, 5(1), 167-182.

Demiroz, H., & Yesilyurt, S. (2015). Effective Foreign Language Teaching: Perceptions of Prospective English Language Teachers. *Universal Journal of Educational Research*, 3(11), 862-870.

Dibapile, W. T. S. (2012). Teacher efficacy and classroom management among Botswana junior secondary school teachers. PhD dissertation, University of Tennessee, Knoxville, US.

Emmer, E. T., & Gerwels, M. C. (2005). Establishing Classroom Management for Cooperative Learning: Three Cases. *Online Submission*.

Ghasemi, B., & Hashemi, M. (2011). The study of the characteristics of successful English language teachers from the view point of the English language students of Islamic Azad University, Hamedan Branch. *Procedia-Social and Behavioral Sciences*, 28, 411-415.

Gupta, A., & Lee, G.-L. (2020). The effects of a site-based teacher professional development program on student learning. *International Electronic Journal of Elementary Education*, 12(5).

Kabilan, M.K., & Veratharaju, K., 2013. Professional development needs of primary school English-language teachers in Malaysia. *Professional Development in Education*, 39 (3), 330–351.

Kaboodvand, M.A. (2013). Perceptions of effective language teaching in Iran. *University of Exeter Journal*, 43-57.

Kaneko-Marques, S. M. (2015). Reflective teacher supervision through videos of classroom teaching. *PROFILE Issues in Teachers' Professional Development*, 17(2), 63-79.

Khany, R., & Ghoreyshi, S.M. (2013). On the relationship between Iranian EFL teachers' efficacy of classroom management, reflective thinking, and transformational leadership style: A structural equation modeling. *Issues in Language Teaching (ILT)*, 2(1), 55-81.

Khojastehmehr, R., & Takrimi, A. (2008). Characteristics of effective teachers: Perceptions of the English teachers.

Le, V. C., & Do, T. M. C., 2012. Teacher preparation for primary school English education: a case of vietnam. In: B. Spolsky and Y-I. Moon, eds. *Primary school English-language education in Asia: From policy to practice* (pp.106–121). Routledge.

Moradi, K., & Sabeti, G. (2014). A comparison of EFL teachers and EFL students' understandings of 'highly effective teaching'. *Procedia-Social and Behavioral Sciences*, 98, 1204-1213.

Rahimi, M., & Asadollahia, F. (2012). EFL teachers' classroom management orientations: investigating the role of individual differences and contextual variables. *Procedia-Social and behavioral sciences*, 31, 43-48.

Ramos-Rodríguez, E., Fernández-Ahumada, E., & Morales-Soto, A. (2022) Effective teacher professional development programs. A case study focusing on the development of mathematical modeling skills. *Educ. Sci.*, 12 (2), 1-21.

Rubio, C. M. (2009). Efective teachers-profesional and personal skills. *Ensayos: Revista de la Facultad de Educación de Albacete*(24), 35-46.

Rokhyati, U. (2015). English teachers' professional development and self-confidence in performing their profession. *International Journal on Studies in English Language and Literature (IJSELL)*, 3 (2), 78-82.

Sancar, R., Atal, D., & Deryakulu, D. (2021). A new framework for teachers' professional development. *Teaching and Teacher Education*, 101, 103305.

Sezer, Ş., Karabacak, N., Küçük, M., & Korkmaz, İ. (2019). School Administrators Opinion on Professional Skills Required To Be Gained to Classroom Teachers In-Service Training Process. *Journal of Theoretical Educational Science*, 12(4), 1223-1238.

Shahvand, M., & Rezvani, E. (2016). Iranian EFL teachers' beliefs and practices on effective teaching: The case of gender and level of experience. *Research in English Language Pedagogy*, 3(2), 30-43.

Shishavan, H. B., & Sadeghi, K. (2009). Characteristics of an effective English language teacher as perceived by Iranian teachers and learners of English. *English language teaching*, 2(4), 130-143.

Silver, S. (2015). The impact of reflective dialogue between a mentor and a new teacher on the new teacher's instructional practices. Graduate Theses & Dissertations. Retrieved from [http://scholarworks.arcadia.edu/grad\\_etd](http://scholarworks.arcadia.edu/grad_etd)

Smet, M. (2022). Professional development and teacher job satisfaction: Evidence from a multilevel model. *Mathematics*, 10 (51), 2-17.

Wichadee, S. (2010). *Defining the effective English language teacher: Students' and teachers' perspectives*. Paper presented at the JALT2009 Conference Proceedings. Tokyo: JALT.

Zamani, R., & Ahangari, S. (2016). Characteristics of an effective English language teacher (EELT) as perceived by learners of English. *International Journal of Foreign Language Teaching and Research*, 4(14), 69-88.

Zein, M. S. (2017). Professional development needs of primary EFL teachers: Perspectives of teachers and teacher educators. *Professional Development in Education*, 43(2), 293-313.



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