HACETTEPE ÜNİVERSİTESİ
EĞİTİM BİLİMLERİ ENSTİTÜSÜ

Department of Foreign Languages Education
English Language Teaching Program

PRE-SERVICE AND IN-SERVICE ENGLISH LANGUAGE TEACHERS' SELF-EFFICACY BELIEFS AND METACOGNITIVE AWARENESS

Ümran ÜSTÜNBAŞ

Ph.D. Dissertation

Ankara, (2020)

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To the leading edge... Toward being the best...

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HİZMET ÖNCESİ VE HİZMET İÇİ İNGİLİZCE ÖĞRETMENLERİNİN ÖZ-YETERLİK İNANÇLARI VE ÜST BİLİŞSEL FARKINDALIKLARI

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Abstract

This study aims to examine teacher self-efficacy and metacognitive awareness of pre-service and in-service English language teachers and if there is any relationship between their self-efficacy beliefs and metacognition. The study also explores whether there are any similarities or differences between these groups in light of a number of demographic factors and other associated factors suggested in the existing research. Considering these purposes, data of the study which is in a mixed-method design were collected at one of the leading state universities in Turkey with participation of 96 senior students at English Language Teaching (ELT) department and 53 English lecturers working at the School of Foreign Languages of that university through valid and reliable scales on the variables and semi-structured interviews. Data analyses revealed that both groups had high levels of self-efficacy and metacognitive awareness, and there was a strong relationship between self-efficacy and metacognitive awareness. Furthermore, there was no statistically significant difference between these two groups in the related variables. As for demographic factors, it emerged that gender, years of experience or academic achievement were not effective in leading a difference among the groups. Additionally, qualitative data revealed factors affecting pre-service and in-service English language teachers' self-efficacy beliefs and metacognition either positively or negatively. To this end, while undergraduate education and teaching practice were reported to affect pre-service teachers' self-efficacy and metacognition, low level of student motivation was considered as the main factor for in-service teachers. Overall, this study proposes significant implications for language teacher education and teaching profession.

Keywords: teacher self-efficacy, metacognitive awareness, ELT, teacher education

Öz

Bu çalışma, hizmet öncesi ve hizmet içi İngilizce öğretmenlerinin öz-yeterlik inançlarını ve üst bilişsel farkındalıklarını, ayrıca bu iki etmen arasında herhangi bir ilişki olup olmadığını araştırmayı hedeflemektedir. Bununla birlikte, çalışma kapsamında birtakım demografik etkenler ve literatürde yer alan diğer ilgili etkenler ışığında söz konusu iki grup arasında herhangi bir benzerliğin ya da farklılığın olup olmadığı araştırılmaktadır. Bu amaçlar doğrultusunda, karma çalışma tasarımında yürütülen bu çalışmanın verisi, Türkiye'de önde gelen devlet üniversitelerinden birinin İngilizce Öğretmenliği bölümünde eğitim gören 96 son sınıf öğrencisi ve aynı üniversitenin Yabancı Diller Yüksekokulu'nda çalışmakta olan 53 İngilizce öğretim görevlisinin katılımıyla geçerlik güvenilirlik analizleri yapılmış ölçekler ve yarı yapılandırılmış görüşmeler yoluyla toplanmıştır. Yapılan veri analizleri, her iki grup katılımcının öz-yeterlik inançlarının ve üst bilişsel farkındalık düzeylerinin yüksek olduğunu ve bu iki etmen arasında güçlü bir ilişki olduğunu ortaya koymaktadır. Ayrıca, söz konusu değişkenler konusunda iki grup arasında istatistiksel olarak anlamlı bir fark olmadığı ortaya çıkmıştır. Demografik etkenlerin etkisi konusunda ise, çalışma, cinsiyet, öğretmenlik tecrübesi ve akademik başarı değişkenlerinin farklılığa sebep olacak herhangi bir etkisinin olmadığını önermektedir. Çalışmanın nitel verisi, İngilizce öğretmen adaylarının ve öğretmenlerinin öz-yeterlik inançlarını ve üst bilişsel farkındalıklarını etkileyen bir takım etkenlerin olduğunu ortaya koymaktadır. Bu açıdan, lisans eğitimi ve öğretmenlik deneyimi İngilizce öğretmen adayları için etkili etkenler iken, hizmet içi İngilizce öğretmenleri için ana etkenlerin başında düşük öğrenci motivasyonunun geldiği ortaya çıkmıştır. Bir bütün olarak ele alındığında, bu çalışma İngilizce öğretmen eğitimi ve öğretmenliği alanları için önemli sonuçlar ortaya koymaktadır.

Anahtar sözcükler: öğretmen öz-yeterliği, üst bilişsel farkındalık, İngilizce öğretimi, öğretmen eğitimi

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Symbols and Abbreviations

AMOS : Analysis of Moment Structures

BA : Bachelor Degree

CoHE : Council of Higher Education

EFL : English as a Foreign Language

ELT : English Language Teaching

EPOSTL : European Portfolio for Student Teachers of Languages

GPA : Grade Point Average

LTES : Language Teachers' Efficacy Scale

MAI : Metacognitive Awareness Inventory

OECD : Organization for Economic Cooperation and Development

OSTES : Ohio State Teacher Efficacy Scale

PLTES : Pre-service Language Teachers' Efficacy Scale

SEM : Structural Equation Modeling

SPSS : Statistical Package for Social Sciences

TSES : Teachers' Sense of Self-efficacy Scale

Chapter 1
Introduction

This chapter provides an introduction to the current study accompanied by an introductory theoretical background. It also presents statement of the problem, research questions; purpose and the significant of the study. Lastly, it defines related variables of the study.

Introduction

Effective teaching that centers students' learning (Devlin & Samarawickrema, 2010) requires teachers to have a number of qualities such as critical thinking as well as content knowledge. On the other hand, teachers' beliefs about how much they have those skills and how well they could reflect them into their practices have been reported to be highly connected to their efficacy in teaching (eg., Bandura, 1997; Hoy, Hoy & Davis, 2009; Tschannen-Moran & Hoy, 2001). Overall, the extent to which teachers have cognitive skills and knowledge as well as their efficacy beliefs about teaching play a significant role in student achievement particularly in a century in which students' use of their cognitive skills is highly encouraged as part of teaching 21st century skills (Saavedra & Opfer, 2012). Thus, effective teaching in the 21st century highlights cognitive and psychological aspects of teaching; metacognition and self-efficacy both for in-service teachers and teacher education.

One of the major objectives of teacher education programs is to grow prospective teachers with qualities of effective teaching, thus, to promote a sense of efficacy (Ashton, 1984). Prospective teachers are to be equipped with skills and qualifications such as 'instructional planning' (Stronge, 2018), and these skills would enable them to handle issues which are involved in teaching profession and require to be 'analytical', which is considered as a quality of effective teachers (Cruickshank & Haefele, 2001 in Stronge, 2018). Yet, the degree of achieving this objective is dynamic due to a number of social and individual factors such as gender and proficiency (Ahiatrogah, 2017). Furthermore, discrepancy between theory and practice during teacher education has been reported as a significant factor affecting early years of teaching profession (eg., Coskun & Daloglu, 2010; Yazan, 2016). Besides, individual and contextual factors such as pre-service teachers' beliefs, attitudes and individual characteristics are reported to play a role in their education

(eg., Klassen & Chiu, 2010; Knoblauch & Hoy, 2008; Peacock, 2001; Yuan & Lee, 2014).

Due to effective factors such as contextual and personal factors, teachers who have been graduated from teacher education programs possibly start and carry on teaching profession by holding distinct beliefs and attitudes towards the profession from one another, which might affect quality of teaching profession. Coolie, Shapka and Perry (2012) attributed this change and effect to school climate and social-emotional factors. Gender, work load, job stress and job satisfaction are among other attributed factors affecting the quality of teaching profession (eg.,Caprara, Barbaranelli, Steca & Malone, 2006; Klassen & Chiu, 2010). Additionally, teacher motivation has been suggested to be another individual factor effective in the quality of teaching and student motivation (e.g., Schiefele, 2017). These factors could also be connected with teachers' beliefs.

Teacher self-efficacy, which could be defined as the degree of beliefs that a teacher has about affecting students' success, gain and behaviors, is among personal factors that might influence the nature of teaching qualifications. According to Bandura (2006), efficacy beliefs affect people's actions and thinking skills, the mood of their emotions, perseverance and achievement. Thus, efficacy beliefs could also be considered of major importance in teacher education since they affect prospective teachers' actions and visions.

As for the sources of self-efficacy beliefs, Bandura (1997) stated that *mastery experiences, vicarious experiences*, *verbal persuasion* and *emotional arousal* cause beliefs. Seemingly, with its sources, teacher self-efficacy has been suggested to be a highly significant issue in teacher education research from both pre-service and in-service teachers' perspectives (eg., Pendergast, Garvis & Keogh, 2011). Its highlighted importance is likely to be caused by the fact that beliefs lead to a change in the nature of one's practices either positively or negatively. In a positive sense, it has been revealed that high-level of teacher self-efficacy affects job satisfaction and student achievement (eg., Caprara, et al., 2006; Huber, Fruth, Avila-John & Ramírez, 2016). Conversely, low level of teacher self-efficacy has been suggested to cause burnout (eg.,Skaalvik & Skaalvik, 2010).

Another essential skill that is among dynamic personal factors in teacher education and teaching is metacognition (or metacognitive awareness), which could be defined as thinking about knowledge. It could be divided into two groups, namely *metacognitive knowledge*; *declarative knowledge*, *procedural knowledge* and *conditional knowledge* and *regulation of cognition*; planning, strategy use etc. As Schraw (1998) indicated, *declarative knowledge* is the knowledge of *what*, *procedural knowledge* is the knowledge of *how* and *conditional knowledge* is the knowledge of *why* and *when*. The term of metacognitive awareness refers to being aware of the knowledge possessed and how to use this knowledge. With regard to the significance of this skill, it seems obvious that fostering pre-service teachers' metacognition leads to a positive effect on their future teaching practices as well as in-service teachers' since it involves teaching related skills such as strategy use and planning. In other words, now that awareness about cognition enables individuals to process information faster, plan actions better as one knows their own capacity and thinking skills well, it poses importance for teacher education and teaching since planning lessons; reacting and reflecting on cases in the classroom are among the issues basically associated with metacognitive awareness. Thus, the current study focuses on two significant elements in language teacher education and language teaching: teacher self-efficacy and metacognitive awareness.

Background of the Study

Self-efficacy defined as "people's beliefs in their capabilities to produce given attainments" (Bandura, 1997, in Bandura, 2006, p. 307) has been one of major concerns in educational research in general as well as language learning since it has been among cognitive and psychological factors influencing language acquisition. Thus, there have been various attempts investigating its relation to language learning (eg., Raoofi, Tan & Chan, 2012; Wong, 2005). Similarly, self-efficacy has been proposed as a significant aspect of teaching by making it a research interest in teaching and teacher education for years. In this sense, teacher self-efficacy has been associated with varied concepts; teaching experience (e.g., Chen & Yeung, 2015); classroom management and student achievement (eg., Caprara, et al, 2006), teacher burn-out (eg., Skaalvik & Skaalvik, 2010). For instance, in a study conducted by Schwarzer and Hallum (2008), it emerged that

teachers with a low level of self-efficacy reported more burn-out and stress than their co-workers who were with a high level of self-efficacy, which basically highlights the importance of sense of self-efficacy in teaching profession. However, while it has been much investigated in other fields of teaching (eg., science teaching; Desouza, Boone & Yılmaz, 2004; agriculture; Swan, Wolf & Cano, 2011) and the studies have generally been on in-service teachers who are in their early careers, self-efficacy beliefs of pre-service and experienced language teachers have still been an unexplored issue due to the lack of research particularly in Turkey as also stated by Atay (2007) and Koçoğlu (2011), which leads to one of the focuses of the current research; to investigate whether there are any similarities or differences between both groups in their self-efficacy beliefs or whether there is any change through years and experience.

One of the concepts that is considered as related to teacher self-efficacy is metacognitive awareness defined as higher order skills consisting of knowledge; *declarative knowledge, procedural knowledge, conditional knowledge* and also mental regulations; strategies of planning, comprehension monitoring, debugging and evaluation (Schraw & Dennison, 1994). Therefore, it has been proposed to have an impact on teacher education and teaching as well as learning (e.g., Akın, Abacı & Çetin, 2007, Alkan & Erdem, 2014; Koç & Kuvaç, 2016; Nahrkhalaji, 2014; Young & Fry, 2008) since it has been proposed that prerequisite of teaching metacognitive awareness is to have metacognitively aware teachers (Hiver & Whitehead, 2018).

Although metacognitive awareness tends to be a crucial issue for teachers, as Young and Fry (2008) asserted, the research on how metacognitive awareness plays a role in teacher education is not much for a number of reasons: Duffy (2005, cited in Young & Fry, 2008) attributed this lack of interest in the research to environmental issues, lack of metacognitive training for pre-service teachers or the fact that they are already considered as metacognitively developed. Therefore, it could contribute to the literature to uncover pre-service language teachers' metacognitive awareness levels in the manner of a probable improvement in the effectiveness of teacher education programs. Moreover, when the related literature has been reviewed, it has been found that research on metacognitive awareness in language education basically focuses on either language learning or language

teacher education (eg., Goh, 1997; Öz, 2005; Pintrich, 2002; Vandergrift, Goh, Mareschal & Tafaghodtari, 2006), so metacognitive awareness in in-service language teacher research still remains as an unpacked issue, which makes it essential to explore.

Considering that teacher self-efficacy and metacognitive awareness are suggested to be especially effective in teacher education, there might be a connection between the two concepts, and they may also influence language teaching. However, there is limited evidence in language teacher education and teaching research on the connection of teacher self-efficacy and metacognitive awareness compared to other branches of teaching (eg., Alkan & Erdem, 2014 on chemistry). In addition, even though prospective teachers may have high levels of self-efficacy beliefs and awareness during their education, the levels might decrease after starting the profession due to a number of contextual factors. Considering this possibility, it is prominent that connection/disconnection between training and teaching be emphasized and factors effective in it be revealed. Therefore, the current study aims to provide evidence for this gap.

Statement of the Problem

Teacher education could be considered as highly significant since it is among the factors influencing students' learning. To this end, teacher education programs aim to prepare prospective teachers for the profession with necessary knowledge and skills. Yet, it is suggested in the literature that pre-service teachers report there is much emphasis on theory in teacher education, which could not be reflected in practice in the profession (eg., Seferoglu, 2006). Similarly, due to dynamic factors, the effectiveness of teacher education programs depends on individuals. With regard to one of these dynamic factors, teacher self-efficacy, it has been found out that while it is at a high level during teacher education years (e.g., Woolfolk & Hoy, 1990; Pendergast, et. al,, 2011; Wenner, 2001), it decreases in the first years of profession (eg., Moseley, Reinke & Bookour, 2003; Pfitzner-Eden, 2016; Woolfolk Hoy, 2000). One of the reasons behind it might be discrepancy between theory and teaching practice reported aforementioned (eg., Seferoglu, 2006; Karakaş, 2012; Yazan, 2016). Moreover, a number of studies put forward that there is a mismatch between teachers' beliefs and their practices (eg. Basturkmen, 2012; Uztosun,

2013), and these studies previously considered work load, larger classes, time constraints and low pay as potential reasons for it. Seemingly, there is a discrepancy between beliefs and practices and also a decrease in the level of self-efficacy beliefs regarding pre-service and novice teachers. Nevertheless, there is lack of research reported on self-efficacy beliefs of experienced English language teachers (Atay, 2007). Furthermore, on the condition that the decrease is likely to be commonly experienced among language teachers, it is imperative to explore reasons leading to it for increasing effectiveness of language teaching. Moreover, even though numerous scales have been developed to address teachers' self-efficacy (e.g., Bandura, 1997; Tschannen-Moran & Hoy, 2001), these instruments have been on general teaching efficacy or they have commonly been about self-efficacy considering teaching at K-12 level (Tschannen-Moran & Hoy, 2001). Additionally, wording of the items on these scales do not address pre-service teachers. Thus, in order for pre-service language teachers to internalize the items better and in order to develop a scale which could be applicable to most language teaching contexts, this study also aims to develop a self-efficacy scale specific to language teachers, especially to pre-service language teachers.

In addition to lack of research in teacher self-efficacy beliefs of both pre-service and in-service English language teachers, metacognitive awareness of them has also been a neglected issue in the literature. Regarding that current education programs aim to foster 21st century skills in which critical thinking and strategy use are involved, principally, teachers are required to have such skills, which highlights the significance of metacognitive awareness in teaching and current teacher education programs (Hiver & Whitehead, 2018). Thus, promoting metacognition of pre-service teachers is fundamental as teaching in 21st century is demanding for higher order cognitive skills.

Considering importance of language learning, thus, demanding nature of language teaching, it could be assumed that language teachers are to have a high level of metacognitive awareness since they need to think critically, use strategies and evaluate available sources in a way that corresponds to learners' needs, especially in the new century when there are numerous opportunities based on new trends and innovations. Thus, there is a need to depict the current state of language teaching and teacher education programs in terms of teachers' metacognitive

awareness both from the perspectives of pre-service and in-service language teachers so as to meet demands of education in the new century.

In Turkey, teacher education programs are provided at most of the universities, the total number of which is approximately 200 and nearly 60 of them have English Language Teaching (ELT) departments that basically aim to prepare prospective English language teachers who are to be equipped with skills and qualifications to be accomplished teachers. Prospective language teachers are provided with teaching skills and qualifications through methodological courses and due to Bologna process, the content and syllabi of these courses are similar at these universities. In the last year of their education, pre-service teachers practice teaching through practicum. Yet, a number of program evaluation studies suggested that the content of the courses provided for student teachers is not in line with real classroom conditions (eg., Baştürkmen, 2012; Coskun & Daloglu, 2010; Uzun, 2016). It does not seem obvious whether these courses affect their efficacy beliefs and metacognitive awareness. Furthermore, pre-service teachers in the study of Seferoğlu (2006) reflected that they did not have sufficient practice opportunities, which might affect their self-efficacy beliefs in turn. Other background factors such as their attitudes might also have an effect on achieving objectives of these programs. Thus, it is necessary to look into these factors and their influence on pre-service English language teachers' self-efficacy and metacognitive awareness.

As to English language teachers in the profession in Turkey, there is very little research (eg. Yılmaz, 2011) on their self-efficacy beliefs which might be attributed to various background factors such as burn-out, stress levels or job satisfaction and their metacognitive awareness. Looking into their efficacy beliefs and metacognitive awareness especially in a demanding context (higher education in Turkey) might resolve how these factors are reflected into language teaching. Overall, examining the current state of English language teacher education programs and language teaching may be beneficial to determine factors influencing teachers' effectiveness.

Aims and Significance of the Study

The main focus of this study is to examine self-efficacy beliefs and metacognitive awareness of English language teachers. More specifically, it aims to explore whether there is any relationship between these two components and if there is any difference between pre-service and in-service English language teachers in relation with their self-efficacy beliefs and metacognitive awareness. If so, this study investigates possible background factors such as demographic information effective in this difference. Thus, the findings of the study could benefit understanding of the importance of the components in English language teacher education and teaching. Furthermore, the findings might be considered in evaluating current state of ELT and teacher education.

In the literature, teacher self-efficacy has been investigated basically by administrating scales that involve general teaching capabilities or that address in-service teachers of other fields such as chemistry or math. Moreover, wording of the items on these scales are generally about teaching children. No scale has been developed as specific to language teachers with capabilities apart from basic areas such as classroom management and especially for pre-service teachers of language teaching departments (within the scope of this study ELT departments). However, a scale the target of which is pre-service English language teachers could be more appropriate in order to obtain more valid and reliable findings since the items are contextual and help the participants make connections with their own contexts. Thus, this study aims to develop a self-efficacy scale with two versions specific for pre-service and in-service English language teachers. That the items on the scale are related to not only language teaching contexts in a broad sense, but also English language teaching and teacher education in a narrow sense makes the scale applicable to a range of language teaching contexts, which is different from other scales and studies in the field.

With regard to research on teacher self-efficacy beliefs, existing studies have focused on pre-service teachers and early years of teaching. As a difference, this study focuses on searching for any possible relationship or difference between pre-service and experienced English language teachers. Tracking similarities or differences between the two groups could increase understanding changes in

beliefs about teaching capabilities in years and potential factors effective in this change. In a deeper sense, the findings of the study may reveal aspects to consider in effectiveness of language teaching and teacher education. Consequently, it aims to provide evidence for the related gap in the literature.

One of the purposes of the current study is to explore metacognitive awareness of pre-service and in-service English language teachers. As opposed to other studies in the literature, this study aims to focus on their metacognition as a possible related factor to their self-efficacy beliefs. Furthermore, this study addresses metacognitive awareness of its participants (prospective and experienced English language teachers) who are likely to be considered as metacognitively aware making it necessary to provide evidence for this neglected issue in the related research.

In Turkey, there is no study focusing on the change in the self-efficacy beliefs of English language teachers with its connection to these teachers' metacognition to the knowledge of the researcher. Therefore, this study aims to explore the current state of English language teaching and teacher education from the perspectives of its main stakeholders; pre-service and in-service English language teachers. On the condition that there are significant similarities or differences between the two groups, further investigation within the scope of the study helps understanding the underlying factors leading to them. Compared to other studies, the participants of this study are English lecturers and senior students of ELT department of a top ranking university in Turkey, which is important considering the purpose of the study and admission requirements of the university. That they are expected to have a number of high-level of qualifications involving components of metacognition makes the research findings valuable in evaluating effectiveness issue in language teaching and teacher education. As a result, the findings could provide implications to gain an insight in this specific field of teaching. Therefore, it would be appropriate to unpack connection of the potential factors before diving in the depth of elements of effective language teaching and teacher education in ELT departments of universities in Turkey, which is one of the research purposes of this study.

Research Questions

Taking the problem and purpose abovementioned into account and focusing on both prospective and experienced EFL teachers, this study aims to address the following research questions:

1. What are pre-service and in-service EFL teachers' perceived levels of self-efficacy and metacognitive awareness?

2. Is there a significant relationship between pre-service and in-service EFL teachers' perceived levels of self-efficacy and metacognitive awareness?

3. Is there any difference in self-efficacy and metacognitive awareness (levels) between pre-service and in-service EFL teachers?

4. Is there any difference in the mean scores of pre-service and in-service EFL teachers' perceived levels of self-efficacy and metacognitive awareness as a function of demographic information?

Assumptions and Limitations

The current study is expected to contribute to the improvement of ELT teacher education programs and language teaching by providing an insight into a number of factors that are aforementioned and suggests implications for future practices. It also supports language learning as the focuses of the research are highly related to teaching-learning processes. However, there are certain limitations as follows:

1) The study was planned to be conducted in different settings. That the participants were from different settings was inhibiting for data collection considering the difficulty in data collection process of the pilot study. Even though potential participants were requested to agree on participating in the study through calls at three times, the number could not be increased. Thus, the actual study was carried out only one setting and the number of the participants was less than the intended

number. As a result, it may be insufficient so as to generalize the findings and implications in a global sense due to the number of the participants.

Definitions

Effective teaching: It involves a number of teacher qualities and characteristics that maximizes students' learning.

Effective language teaching: It refers to "clear and enthusiastic teaching that provides learners with the grammatical (syntactical and morphological), lexical, phonological, pragmatic, and sociocultural knowledge and interactive practice they need to communicate successfully in the target language" (Bell, 2005, p. 260).

Self-efficacy: It refers to **"**beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p. 2). According to Bandura (1995), self-efficacy beliefs have an impact on humans' thoughts, feelings, actions and motivation.

Teacher self-efficacy: It could be defined as a teacher's beliefs about his or her potential and abilities to fulfill their teaching purposes and affect students' behavior and achievement (Ashton & Webb, 1986; Guskey & Passaro, 1994).

Metacognition: It includes both knowledge of one's knowledge, processes, cognitive and affective states, and the ability to consciously and deliberately monitor and regulate one's knowledge, process, and cognitive and affective states" (Hacker, 1998, p. 11). This term could be interchangeably used for 'metacognitive awareness".

Metacognitive awareness: It refers to higher order cognitive skills consisting of declarative knowledge (knowledge of what), procedural knowledge (knowledge of how) and conditional knowledge (knowledge of why and when). It also involves cognitive regulation such as planning, managing the information, monitoring, debugging and evaluation (Schraw & Dennison, 1994).

Demographic factors: These factors refer to personal qualities such as gender and age (or years of experience for teachers).

Academic achievement (or performance): It could be defined as **"**the extent to which a student, teacher or institution has achieved their short or long-term educational goals" (Retrieved from https://www.definitions.net/definition/ academic+achievement on 11.01.2020)

Contextual factors: These factors are characteristics representing a particular context or group. For instance, in teaching context, school climate could be considered as a contextual factor.

Conclusion

This chapter has presented a brief introduction to the current study. In this sense, background of the study, statement of the problem, purpose and significance of the study, research questions, limitations and definitions of the key terms have been covered. The next chapter provides a detailed theoretical framework for the related terms and concepts.

Chapter 2
Literature Review

Introduction

This chapter presents relevant literature on the components of the current research; teacher qualities and effective teaching, self-efficacy beliefs, teacher self-efficacy and metacognitive awareness, particularly for English language teachers. Thus, related concepts are reviewed in accordance with evidence of previous research.

Teacher Qualities and Effective Teaching

Student achievement is the ultimate purpose of any educational program, and there are a number of qualities that the elements of teaching and the people involved need to have. Yet, existence of these qualities does not necessarily mean effective teaching since there are also a number of contextual factors to consider for effective teaching. Kyriacou (2009) classified the factors in three categories; *context variables* which refer to any qualities of learning environment, *process variables* referring to any qualities of actual teaching learning process such as strategy use, teacher explanations, student-teacher interaction, questions and answers, tasks, use of feedback and student participation. The last category stated by Kyriacou (2009) is *product variables* which refer to any desired outcome of teaching learning process.

In order to evaluate effectiveness of educational programs, it is essential to bear changing factors in mind, but there are still proposed elements that are necessary for effective teaching and are regarded as the core of factors leading to student achievement and improved teacher evaluation (eg., Brown & Atkins, 1988; Chen, Brown, Hattie, & Millward, 2012; Gordon, 1974; Mujis & Reynolds, 2001 in Tavakoli & Baniasad-Azar, 2017). To this end, teachers, one of the stakeholders of educational programs are basically required to possess “verbal ability, content knowledge, educational coursework, teacher certification and teaching experience” (Stronge, Tucker & Hindman, 2004, p. 9) for effective teaching. (See Figure 1 for the relationship between the basic requirements of effective teaching)

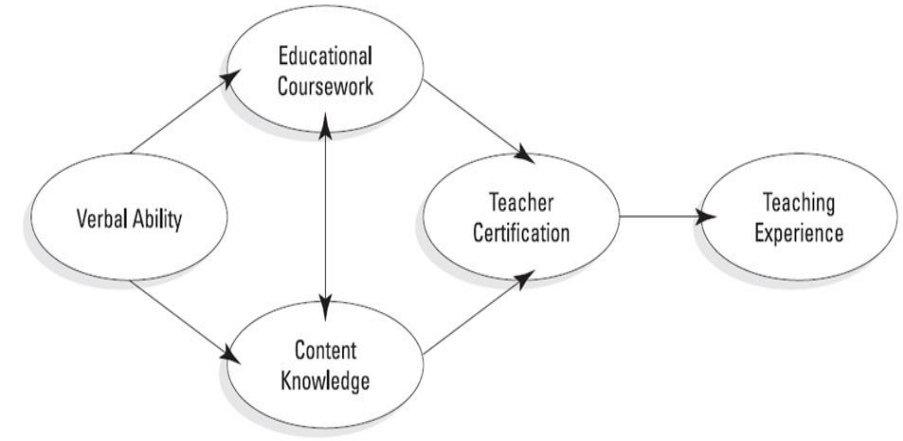

Figure 1. The relationship among the basic requirements of effective teaching (Stronge et al., 2004, p. 17).

Verbal ability refers to the fact that teachers need to know how to communicate effectively with their students and other stakeholders through clear explanations, therefore, establish amity. Evidence in the literature suggests that there is a positive relationship between teachers' verbal ability and student achievement (eg., Lewis, 2001; Wenglinsky, 2000*).* It is also essential that teachers have a high level of *content knowledge* and integrate that knowledge into their teaching practices. Thus, they could meet their students' needs and contribute to their achievement better. In addition, teachers who have a high level of content knowledge could make arrangements and plans and create opportunities that might encourage students to synthesize knowledge and reflect it into their lives. According to Wenglinsky (2000; 2004), teachers who have much content knowledge affect student achievement positively and convey the knowledge to students in better ways.

Another significant requirement of effective teaching is that teachers should have chances to practice teaching in their pre-service education, which helps teacher candidates transfer their knowledge into practice and shape beliefs and expectations about teaching profession. Through *educational coursework* and *teaching certificate*, teachers start the profession by meeting basic requirements, which influences student achievement positively (eg., Monk, 1994; Wenglinsky, 2000; 2004). Stronge (2007) stated that teachers who have little coursework are likely to have problems concerning classroom management, curriculum design and

teaching practices. Lastly, experience leads to mastery in teaching and fosters teachers' abilities and skills as also suggested by Stronge et. al., (2004), which are as follows:

Through experience, teachers could

> develop an increased depth of understanding about the content and how to teach it to students (Covino & Iwanicki, 1996 in Stronge et al, 2004, p. 16)
> learn and use various strategies to meet students' needs (Durall, 1995; Glass, 2001, in Stronge et al, 2004, p. 16)
> learn how to maximize his or her usage of instructional materials, management of the classroom, and working relationships with others (Reynolds, 1992, in Stronge et al, 2004, p. 16)
> incorporate reflective practice (Allen & Casbergue, 2000, in Stronge et al, 2004, p. 16).

Apart from these basic requirements, there are also personal qualities which have been stated to be important for any teachers in the profession. *Personality and will, intelligence*, *sympathy and tact, open-mindedness and sense of humor* are among the qualities that a teacher needs to have for effective teaching indicated by Kyriacou (2009, p. 7). Furthermore, there are ten common principles of effective teaching proposed by Kyriacou (2009) which are as follows:

> Clarity of the teacher's explanations and directions
> Establishing a task-oriented classroom climate
> Making use of a variety of learning activities
> Establishing and maintaining momentum and pace for the lesson
> Encouraging pupil participation and getting all pupils involved
> Monitoring pupils' progress and attending quickly to pupils' needs
> Delivering a well-structured and well-organized lesson
> Providing pupils with positive and constructive feedback
> Ensuring coverage of the educational objectives
> Making good use of questioning techniques (Kyriacou, 2009, p. 12).

Davis and Thomas (1989) presented qualities of effective teaching in categories of *academic engagement, teacher expectations, classroom management*, *organizing learning, orienting students and presenting objectives, increasing clarity, monitoring student progress*, and *ensuring high success rates.* Furthermore, Chen (2007) proposed four elements involved in effective teaching: *caring for students*, *guiding students' all-round development*, *connecting school knowledge to other areas*, and *planning structured lessons.* Moreover, Tavakoli and Baniasad-Azar (2017) carried out a mixed-method study with Iranian high school teachers to examine their conceptions about effective teaching by employing

questionnaires, interviews and observations and proposed that '*being student-focused'*, '*being exam-oriented*', *encouraging the students' involvement in learning*,' and '*using the novelty of methods'* are significant principles of effective teaching.

Effective Language Teaching

While effective teaching principles are dependent on classroom management and use of instructional strategies, and they form basis for teaching practices of all branches of educational programs, there are a number of characteristics which are peculiar to a specific branch of teaching (eg., Norton, 1997 for language teaching; Woolnough, 1994 for science teaching). With regard to language teaching and its effectiveness, Brosh (1996) identified characteristics of an effective language teacher as having '*knowledge and command of the target language'*, '*ability to organize, explain, and clarify, as well as to arouse and sustain interest and motivation among students'* (p. 133). In addition, '*fairness to students by showing neither favoritism nor prejudice'* and '*availability to students*' were other proposed characteristics by Brosh (1996, p. 133) as involved in effective language teaching. Furthermore, Bell (2005) defined effective foreign language teaching as "clear and enthusiastic teaching that provides learners with the grammatical (syntactical and morphological), lexical, phonological, pragmatic, and sociocultural knowledge and interactive practice they need to communicate successfully in the target language" (p. 260). Kurtoğlu-Eken (2007) included components such as *planning and preparation*, *lesson presentation and management* in criteria and suggested that *planning lesson aims and objectives*, *materials and resources*; *raising awareness of students and monitoring them* are among qualifications involved in effective language teaching. Besides, Arikan, Taser and Sarac-Suzer (2008) conducted a study to explore Turkish preparatory school students' perspectives on effective teachers of English. Students in the study reported that *having good knowledge of English*, *welcoming changes and innovations, being friendly and caring* are among characteristics of an effective language teacher. In a study conducted in a Turkish context, Demiroz and Yesilyurt (2015) revealed that teaching communicatively and giving corrective feedback to students' errors are among significant qualities of effective language teaching. Overall, stated qualities and characteristics cover areas such as curriculum, aims and needs, classroom management, use of

instructional strategies, decision making and competency in language skills, and they demonstrate how demanding language teaching is. Consequently, language teachers (English language teachers within the scope of this study) are expected to have these skills and language knowledge to achieve teaching related tasks, which highlights the challenge that they undertake as it includes not only a need for competency in a language that they are not native speakers considering that they are in English as a Foreign Language (EFL) context, but also a need to have instructional and pedagogical strategies to teach that language. Thus, being multifaceted, EFL teachers' effective teaching practices are likely to be affected by psychological factors such as beliefs, attitudes and perceptions since personal factors are subsidiary elements of the factors aforementioned and cognitive factors to make arrangements in their teaching practices, making efficacy beliefs and metacognitive awareness (eg., strategy use, decision making) concepts to be considered among primary factors accompanying effectiveness factors considering evidence in the literature having suggested effective teaching is highly related to a teacher's personality and teacher self-efficacy (eg., Klassen & Tze, 2014; Ozder, 2011).

Social Cognitive Theory

Since human factor underlies in every sphere of life, each aspect related to this factor is of prime importance for the existence and development of societies. In this respect, Social Cognitive Theory (Bandura, 1977) explains human nature and its changes from multi-dimensional perspectives (Bandura, 1989; Gist & Mitchell, 1992). According to this theory, three elements; personal factors, behavior and environment are in a bidirectional interaction in which they affect each other, which is called as "*triadic reciprocal determinism*" (Bandura, 1989, p. 2) (See Figure 2), and this interaction leads to individuals' cognitive and psychological development. In other words, the theory supports that not only intrinsic factors, but also environmental factors are effective in shaping development of capabilities in human beings, and individuals are conscious in the process of learning and shaping their capabilities and characters, which explains *human agency* (Bandura, 2001). Thus, Social Cognitive Theory involves metacognitive elements such as self-regulation and psychological elements such as self-efficacy in shaping their behavior and

competencies, which explains why human beings are selective in what they learn considering the social and cognitive processes involved.

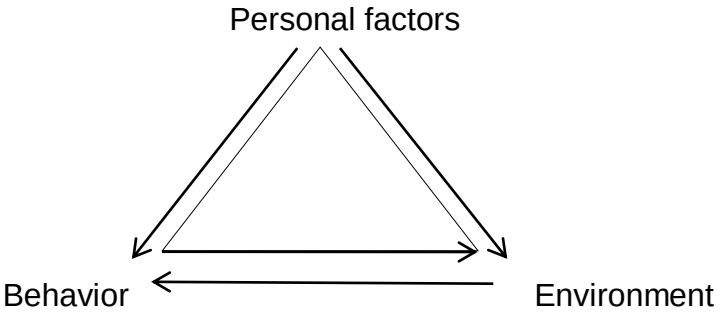

Figure 2. Triadic reciprocal determinism (Bandura, 1997, p. 6).

In this respect, Bandura (2001) stated that there are four main features of human agency; *intentionality*, *forethought*, *self-reactiveness* and *self-reflectiveness*. Accordingly, people act apt to their intentions and make plans of their actions. These plans are the results of experiences and lead to future plans. In order to fulfil these plans, people are motivated and self-regulative. Furthermore, they reflect on their intentions, characteristics, values and purposes in life, which refers to self-reflectiveness and pinpoints how agency (self-efficacy in turn) and metacognitive awareness are connected concepts.

Human agency could be classified as *personal*, *proxy* and *collective* (Bandura, 2001). *Personal agency* refers to people's conscious and self-regulatory nature. *Proxy agency* is related to social aspect of human lives and how they are dependent on other people individually and affected by environmental factors. Lastly, *collective agency* refers to how people live in groups with their shared values and properties. All aspects of human agency determine how self-efficacy beliefs are shaped.

Self-Efficacy

Beliefs are of paramount importance in people's lives since they are among the main factors determining capabilities and limits of human beings. In this sense, Bandura (1986) stated that behaviors are the results of beliefs about capabilities rather than skills and abilities. The significance of beliefs about capabilities is highlighted by Bandura (1997) as follows:

> People make causal contributions to their own psychosocial functioning through mechanisms of personal agency. Among the mechanisms of agency, none is more central or pervasive than beliefs of personal efficacy. Unless people believe they can produce desired effects by their actions, they have little incentive to act. Efficacy beliefs, therefore, is a major basis of action (Bandura, 1997, pp. 2-3)

In other words, self-efficacy beliefs are implied to lead to people's choices for the actions in their lives and help control them (eg., Bandura, 1977; Pajares, 1996; Zimmerman, 2000). Bandura (1995) asserted that self-efficacy defined as one's beliefs about his/her capabilities is one of psychological elements affecting human functions through *cognitive*, *affective, motivation* and *selection* processes. These processes are affected by the "triadic reciprocal determinism" (Bandura, 1989, p. 2) principle of the Social Cognitive Theory. The control of actions is fulfilled through "proxy control" (Bandura, 1997, p. 17) in which a person needs a proxy to perform an action, and high level of self-efficacy is essential in this mode. Therefore, outcome of the performances is influenced by the connection between personal factors (efficacy beliefs), behavior and environmental factors. The nature of expectancies whether they are positive or negative are related to the level and strength of efficacy beliefs. (See Figure 3)

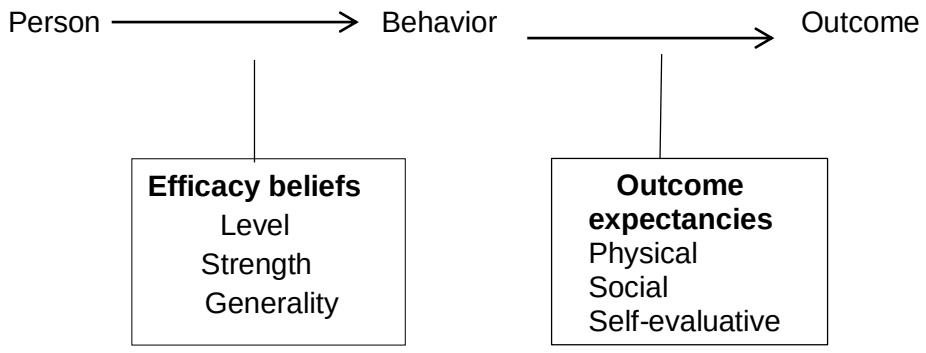

Figure 3. The relationship between efficacy beliefs and outcome expectancies (Bandura, 1997, p. 22).

As seen in the Figure 3, self-efficacy is regarded as an evoking concept with outcome expectancy, in other words, expectancy about consequences of an action since it is considered that self-efficacious individuals are also inclined to try hard so as to achieve their goals despite difficulties. While self-efficacy beliefs are directly related to motivational state in a task, outcome expectations refer to beliefs focusing

on the result of the task. It could also be stated that self-efficacy beliefs are abstract; only based on the matters of success or failure, whereas outcome expectations are concrete; based on gain or loss at the end of the task. Apart from outcome expectations, self-efficacy has distinct features as opposed to other concepts in the literature. For instance, it also differs from self-esteem in that self-efficacy is related to how well an individual performs a task while self-esteem is related to how a person values himself or herself as also suggested by Bandura (1997). Moreover, efficacy has no connection with confidence as self-concepts. To this end, *self-confidence* is a person's complete belief in oneself, but *self-efficacy* is related to one's beliefs about specific tasks and capabilities involved in them.

Among features of self-efficacy, primary ones are *task* and *situation* (Bandura, 1997), which means that self-efficacy beliefs change in line with nature of a task and specific situation. Moreover, *level, facet-specificity* and *strength* are other characteristics of self-efficacy beliefs (Bandura,1997). *Level* in self-efficacy is related to difficulty of a task. Perceiving about how hard a task is might influence perseverance of an individual to face difficulties. *Facet-specificity* refers to expectations about specific abilities and skills. In other words, the number of the skills for which a person feels self-efficacious and expectations related to these skills might be distinct from each other. *Strength* is related to how strong the expectations are, so it could result in either people's giving up or carrying on the task no matter how hard it is and Tschannen-Moran and Hoy (2007) suggested that these beliefs are resistant to change when they are fixed.

Stemming from the attached importance to self-efficacy beliefs, it is easy to track its effects in various areas, one of which is learning. There have been studies on the effect of self-efficacy beliefs on student achievement (eg. Caprara, Vecchione, Alessandri, Gerbino, M. & Barbaranelli, 2011; Mills, Pajares, & Herron, 2007; Pajares, 1996; 2003; Zeldin & Pajares, 2000; Zimmerman, 2000), and these studies put forward that self-efficacy is related to student achievement and motivation due to its association with a number of cognitive skills such as planning, regulating and reflecting, which are also essential skills for achievement. Bearing the role of self-efficacy in learning in mind, it could be possible to consider its role in

teaching as significant as well, which has been supported by studies on teacher self-efficacy in the literature (eg., Chen & Yeung, 2015; Tschannen-Moran & Hoy, 2007).

Sources of Self-Efficacy

Self-efficacy beliefs are rooted in four main sources; *mastery experiences, vicarious experiences*, *social persuasion* and *physiological arousal.* Success is of major importance in individuals' beliefs about their potential whereas failures have an adverse effect on them. Thus, what people can do well; *mastery experiences* lead to future successes, therefore, they are among primary sources of self-efficacy (Bandura, 1995). According to Bandura (1997), *mastery experiences* are the most effective source of self-efficacy because they are the evidence of people's actual capabilities. Successes had as a result of much striving and struggle in the past are inclined to be a permanent source for future successes since they involve a number of cognitive, physical and psychological processes. On the other hand, the effect of short-term, easily achieved goals on efficacy beliefs is not strong as the goals are not result of sophisticated mental and emotional processes such as strategy training and monitoring, which asserts that self-efficacy is connected to metacognitive skills. Self-efficacy beliefs that are not totally established are not sustainable and lack consistency.

Another source of self-efficacy is *vicarious experiences*, which refer to beliefs shaped by the essence of a model who has similar experiences as the person's. The fact that the social model with whom people find similarities in gains and successes might encourage individuals to strive and increase efficacy stemming from the expectation that the individual will gain similar successes as the model in the end. Conversely, negative experiences of the model may affect people's efficacy beliefs adversely. However, if individuals cannot find many similarities with the social model whom they observe, they are not influenced neither positively nor negatively. Bandura (1986) indicated that modeling works through four processes; *attentional processes*, *retention processes, production processes* and *motivational processes*. In this sense, choosing a model by paying attention is the first essential step. Recalling the qualities of the model is also necessary for shaping self-efficacy beliefs. Performing what is modeled is another feature of the process, and ultimately motivation is of great importance to select the model and the action to be modelled.

People do not model and perform the actions which are punished or undesirable. Instead, they are motivated by the actions which are rewarded or appraised. Above all, an individual needs to be conscious of the actions of the model, and it requires positive state of mind, which is another source of self-efficacy: *physiological arousal.*

The third source of efficacy is *social persuasion* which is more or less related to the strength of efficacy beliefs. When people believe that they have capabilities, potential and sources to be successful, they are encouraged to find ways for achieving their goals. In other words, they are persuaded by themselves or through social interaction with other people concerning their strength and the conditions to manage. It is crucial that individuals have realistic assumptions about their skills and abilities that are necessary for the target achievement. Efficacy beliefs are low and they fade away easily when people have unrealistic assumptions about their potential, thus, they could be discouraged. Furthermore, social interaction may influence individuals negatively about their potential. A person who lacks self-efficacy beliefs, but has capabilities to be successful tends to be discouraged unless he or she is supported by other people and they are in need of appraisal, positive feedback and reinforcement of other people to achieve their goals.

The fourth source of self-efficacy beliefs is *physiological arousal* in which emotions and mood influence people's perceived self-efficacy beliefs. For instance, it might be tough to perceive oneself as an efficacious person when people are highly stressed since stress blocks positive thinking. On the contrary, being healthy and mentally relaxed may result in an increase in confidence and high-level of self-efficacy. The nature of the mood whether it is positive or negative is also a source of low or high level of self-efficacy beliefs. When people are in a positive mood, they could perceive their capabilities positively and when they have negative thoughts and moods, their motivation for achievement and their perceived potential diminish. As a whole, taking the importance of beliefs in achieving goals into account, it seems reasonable why self-efficacy beliefs are emphasized for teaching profession.

Teacher Self-Efficacy

Self-efficacy defined as “people’s beliefs in their capabilities to produce given attainments” (Bandura, 1997 in Bandura, 2006, p. 307) is also considered as one of the major aspects of teaching because teachers “need to be confident in their abilities to enact effective instructional practices that result in students’ learning, motivation, and other positive outcomes” (Duffin, French & Patrick, 2012, p. 827) in addition to their content knowledge and teaching skills for effective teaching. Therefore, teacher self-efficacy which is defined as teachers’ beliefs about his or her capabilities to achieve teaching related purposes such as engaging and motivating students despite the difficulties involved (eg., Bandura, 1977; Tschannen-Moran & Hoy, 2001) is essential for demanding task of teaching and involves aspects from varied sources as illustrated in Figure 4.

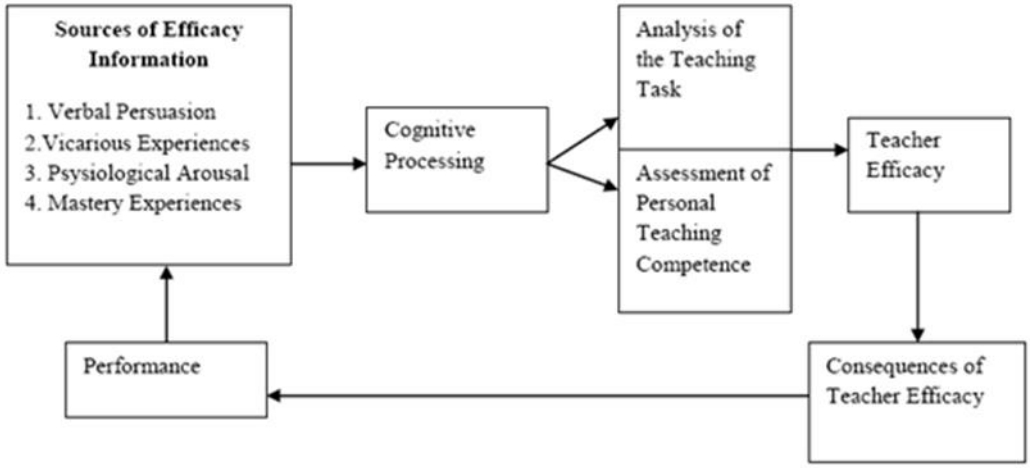

Figure 4. Components of teacher self-efficacy (Tschannen-Moran, Hoy & Hoy, 1998).

As could be seen in the Figure 4, teacher self-efficacy is a multi-dimensional and bidirectional process that involves cognitive and affective elements. On the importance of teacher self-efficacy beliefs, Ashton (1984) asserted that no other characteristics are directly related to student achievement than teacher self-efficacy, and especially teacher education programs are expected to promote pre-service teachers’ sense of efficacy besides building teacher motivation. Moreover, teacher self-efficacy has been indicated to have a positive effect on teaching related tasks

(eg., Ozder, 2011). To this end, teachers with a high level of teacher self-efficacy beliefs were reported to use instructional strategies and new techniques better and achieve classroom management and other teaching tasks better than teachers with a low level of teacher self-efficacy in Ozder (2011).

Sources of general self-efficacy refer to good or bad teaching experiences, observing or interacting with other teachers, teachers' received feedback and teachers' feelings during a teaching task or practice (Zonoubi, Rasekh & Tavakoli, 2017) within the scope of teacher self-efficacy. These sources are in an interaction with cognitive analyses of teaching task and existing competencies and, thus, lead to teacher self-efficacy, and the level of self-efficacy affects the quality of teachers' performances. To this end, it has been proposed that in a positive sense, teacher self-efficacy is associated with commitment to teaching (eg., Chesnut & Burley, 2015), job satisfaction (eg., Wang, Hall & Rahimi, 2015), teacher motivation (Ashton, 1984) and with burn-out or stress (eg, eg., Skaalvik & Skaalvik, 2007),

Measurement of Teacher Self-Efficacy

With regard to teacher self-efficacy research, initial attempts focused on how to measure teacher self-efficacy and included developing instruments for this purpose. Early works of measurement were developed based on Rotter's (1966) theory of social learning, which basically supports dependency of personality development on environmental factors (Tschannen-Moran & Hoy, 2001). According to Rotter (1966), personality refers to changeable potentials based on particular situations. Therefore, teacher self-efficacy beliefs are considered to emerge and change as a result of social interaction in that teachers develop their teaching skills and practices and get motivated for their actions. One of the scales that were developed based on Rotter's (1966) principles is named as RAND measure and it consists of two items. Strong agreement on RAND item 1: *"When it comes right down to it, a teacher really cannot do much because most of a student's motivation and performance depends on his or her home environment."* implies the effect of environment on teachers' beliefs about his or her teaching abilities. Additionally, RAND item 2: *"If I really try hard, I can get through to even the most difficult or unmotivated students."* is in accordance with the definition of teacher self-efficacy, and it highlights teachers' positive beliefs about their teaching abilities. According to

Tschannen-Moran and Hoy (2001), this item is related to a teacher's confidence in their capabilities in improving student achievement and also regarded as "*personal teaching efficacy*" (p. 785).

Broadened version of RAND items was proposed by Guskey (1981), and it put more emphasis on teachers' role and responsibility in student achievement. On this scale, there were 30 items representing two factors; *teachers' responsibility for student success* (R+) and *teachers' responsibility for student failure* (R-). The participants of this scale development study were asked to assign percentages up to 100 for the two options that refer to student success or failure caused by four factors; *specific teaching abilities, the effort put into teaching*, *the task difficulty* and *luck*. The purpose of categorization of the causes was to determine to what extent teachers consider their responsibility for student in student achievement among other causes. For instance, one of the items on the scale was *"When your students seem to have difficulty learning something, is it usually a) because you are not willing to really work at it, or b) because you weren't able to make it interesting for them?* (Tschannen & Hoy, 2001, p. 786). The findings of this study revealed that there was a strong positive relationship between teacher self-efficacy and *responsibility for student achievement,* and the participants considered themselves as responsible for student success rather than failure.

Following Guskey's (1981) attempt, Rose and Medway (1981) proposed a similar scale: the scale of "*teacher locus of control*" comprising of 28 items by giving two options to teachers addressing their responsibility for students' success or failure. For instance, *"If the students in your class perform better than they usually do on a test, would this happen a) because the students studied a lot for the test, or b) because you did a good job of teaching the subject area?"* was an item focusing on teachers' awareness about their responsibilities for students' success. As for findings of this study, Rose and Medway (1981) found out that teachers with a high level of self-efficacy scored better than teachers with low level of self-efficacy on the scale they developed.

Another scale that was developed based on Rotter's (1966) principle was *Webb scale* developed by Ashton, Olejnik, Crocker and McAuliffe (1982 as cited in Tschannen-Moran & Hoy, 2001). The scale included seven items that searched for

teachers' agreement on the two statements provided for each item such as a) *A teacher should not be expected to reach every child; some students are not going to make academic progress;* b) *Every child is reachable. It is teacher's obligation to see to it that every child makes academic progress.* In a similar vein, this scale aimed to investigate how teachers consider their responsibility for student achievement, but it was not commonly used in the literature.

Apart from Rotter's (1966) principle, Bandura's (1977; 1986; 1997) Social Cognitive Theory formed a basis for later teacher self-efficacy scales (eg., Ashton, Buhr & Crocker, 1984; Gibson & Dembo, 1984). As opposed to RAND measures, these scales focused more on outcome of teachers' actions and teachers' capabilities were explained in specific terms. One of the earliest measures of this period was developed by Gibson and Dembo (1984). The scale involves 30 items referring to two factors: *personal teaching efficacy and general teaching efficacy* in 6-Likert scale form ranging from strongly disagree to strongly agree. One of the items on the scale is *'When a student gets a better grade than he usually gets, it is usually because I found better ways of teaching.*' This scale has been the most popular measure of context-specific teacher self-efficacy. Therefore, it has been validated in various contexts (eg., science teaching; Riggs & Enochs,1990; special education; Meijer & Foster, 1988).

One of the well known examples of this category is Bandura's (1997) *Teachers' Self-efficacy Scale (TSS)* that consists of thirty items in seven categories*; efficacy to influence desicion making, efficacy to influence school resources, instructional efficacy, disciplinary efficacy, efficacy to enlist parental involvement, efficacy to enlist community involvement* and *efficacy to create a positive school climate*. For example, one of the items *is How much can you do to get students to believe they can do well in schoolwork?* and teachers are supposed to align a number on the 9-point-scale ranging from 1-nothing to 9-a great deal. All these items refer to components of Social Cognitive Theory, self-efficacy and outcome expentancies.

A recent scale that was developed in order to compensate the deficiency of existing teacher self efficacy scales is *Ohio State Teacher Efficacy Scale (OSTES)* or *Teachers' Sense of Efficacy Scale (TSES) by* Tschannen-Moran and Hoy (2001).

There are two versions of the scale; 24-item long version and 12-item short version. *How much can you influence the class size in your school?* and *How much can you help other teachers with their teaching skills?* are sample items belonging three factors of the scale; *efficacy for student engagement, efficacy for instructional strategies* and *efficacy for classroom management* which address Bandura's (1989) Social Cognitive Theory. See Table 1 for sample of scales developed on the teacher self-efficacy up to now.

Table 1

Sample Scales of Teacher Self-Efficacy

Designer	Scale	Items	Sub-scales
RAND organization	RAND measure	2 items based on Rotter's (1966) social learning theory	environmental effect personal teaching efficacy
Gibson & Dembo (1984)	Teacher self-efficacy scale (TSE)	30 items based on Bandura's (1977) Social Cognitive Theory	2 sub-scales personal teaching efficacy general teaching efficacy
Bandura (1997)	Teacher Self-efficacy scale (TSS)	30 items based on Social Cognitive Theory	7 sub-scales efficacy to influence decision making efficacy to influence school resources instructional efficacy disciplinary efficacy efficacy to enlist parental involvement efficacy to enlist community involvement efficacy to create a positive school climate
Tschannen-Moran & Hoy (2001)	Ohio State Teacher Efficacy Scale (OSTES) or Teachers' Sense of Efficacy Scale (TSES)	a 24-item long form a 12-item short form of TSES	3 sub-scales efficacy in student engagement efficacy in instructional strategies efficacy in classroom management
Skaalvik & Skaalvik (2007)	Norwegian Teacher Self-efficacy Scale (NTSES)	24 items	6 sub-scales instruction adapting education to individual students' needs motivating students keeping discipline cooperating with colleagues and parents coping with changes and challenges
Dellinger, Bobbett, Olivier & Ellett (2008)	Teachers' Efficacy Beliefs System-Self (TEBS-Self)	30 items	3 sub-scales classroom management communication/clarification accomodation of individual differences

While these scales have been developed to address general teaching capabilities, language teachers' self-efficacy has also been addressed in the literature despite very few attempts (eg., Chacón, 2005; Eslami & Fatahi, 2008). Among these scale development studies is Chacón (2005), which is still widely used. The scale combines three separate scales on teacher self-efficacy, language

proficiency and pedagogical strategies. Yet, teacher self-efficacy is addressed through only the three common areas; classroom management, student engagement and instructional strategies rather than involving all areas in one construct and addressing only teachers in the profession, which is also noticed in the scale of Eslami and Fatahi (2008). However, there is also a need to address pre-service language teachers' future teaching experiences, which is aimed in the current study.

In addition to scales created, there are also a great number of validation studies all around the world (eg., Chang & Engelhard, 2016; Çapa, Çakıroğlu & Sarıkaya, 2005; Klassen, Bong, Usher, Chong, Huan, Wong, & Georgiou, 2009; Knobloch & Whittington, 2002). To start with, Çapa et al, (2005) studied on the validation of Turkish version of *OSTES* (Tschannen-Moran & Hoy, 2001) in an adaptation study carried out with 628 pre-service teachers from Turkey. The findings suggested appropriateness of the scale to measure teacher self-efficacy. Similarly, Klassen et al. (2009) analyzed validity of *TSES* (Tschannen-Moran & Hoy, 2001) in five countries; Canada, Cyprus, Korea, Singapore and the USA with participation of 1212 elementary (*N*=709) and secondary school teachers (*N*=502). The results of validity studies suggested that the construct demonstrated strong values for validity across the countries with close geographic conditions; the USA and Canada, Korea and Singapore. In a general sense, *TSES* (Tschannen-Moran & Hoy, 2001) emerged to be a valid construct despite small differences in variances caused by cultural differences.

Chang and Engelhard (2016) conducted a validation study of *OSTES* created by Tschannen-Moran and Hoy (2001). Significance of this study stems from its methodology in that while factor analyses are commonly preferred in validation studies, Chang and Engelhard (2016) employed Rasch model to examine difficulty level of the items on the scale. The data collected from 554 teachers in the U.S.A suggested that the items in *OSTES* (Tschannen-Moran & Hoy, 2001) were appropriate for the target context, and they were easy to comprehend for the teachers, which highlights validity of the instrument.

In one of the later attempts to make adaptation on *TSES* (Tschannen-Moran, 2001), Zee, Koomen, Jellesma, Geerlings and Jong (2016) developed a scale

involving general aspects of teacher self-efficacy; instructional strategies, classroom management and student engagement, but they preferred to focus more on inter- and intra-individual differences in the notion of teacher self-efficacy and, thus, included emotional support in the four-factor construct addressing domain and student specific teacher self-efficacy. The developed construct including 25 items was validated and the developers of the scale suggested that teacher self-efficacy be explored by addressing teacher, student and classroom characteristics.

Even though the scales developed in order to measure teacher self-efficacy serve well for the purpose, they address common teaching capabilities, and the principles they depend on are stated not to be clear (e.g., Klassen & Chiu, 2010; Tschannen-Moran & Hoy, 2001). In this sense, specificity of self-efficacy measures has been emphasized in the literature including the study of Finney and Schraw (2003), who stated that while designing measures, it is fruitful to use specific tasks and measures instead of tasks consisting of general statements and focusing on general abilities. Nevertheless, a number of researchers have dissented specificity of measures and tasks of self-efficacy suggesting a more global sense of self-efficacy. According to these researchers, general self-efficacy tasks could be applicable to various situations, and they could help to reveal personal factors efficiently (eg., Shelton, 1990; Tipton & Worthington, 1984; Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs & Rogers, 1982). In addition to lack of specificity, available scales are generally related to K12 level as the items are based on teaching children (eg., Tschannen-Moran & Hoy, 2001). Thus, there is a need to develop a scale specific to certain teaching fields as specifity of capabilities, tasks and outcome were also asserted by Bandura (1997). Moreover, although target audience of teacher self-efficacy scales are pre-service and in-service teachers that have different contexts, available scales address them similarly. Nevertheless, for pre-service teachers, scales are expected to address their beliefs and confidence about future teaching practices, which was also stated by Pfitzner-Eden, Thiel and Horsley (2014). Considering the need to design an instrument for pre-service teachers, Pfitzner-Eden et al., (2014) adapted the scale of TSES (Tschannen-Moran & Hoy, 2001) and developed a teacher-self efficacy scale for pre-service teachers. The researchers analyzed its validity and reliability with 851 pre-service teachers in Germany and New Zealand. As opposed to other scales, this scale has items

addressing pre-service teachers such as "*How certain are you that you can adjust lessons to the proper level for individual students?",* "*How certain are you that you can control disruptive behavior in the classroom?"* and "*How certain are you that you can motivate students who show low interest in schoolwork?"* The results of factor analyses confirmed that the scale is a valid and reliable instrument addressing the same three constructs on general teaching abilities as TSES (Tschannen-Moran & Hoy, 2001); *instructional strategies, classroom management* and *student engagement.*

In addition to the need for addressing pre-service teachers in self-efficacy scales, Tschannen-Moran and Hoy (2001) suggested that confining scope of efficacy beliefs led to revealing significant findings while arising question is what is really meant by the scope and specificty. With regard to specificity in capabilities of EFL, Borg and Edmett (2018) developed a self-assessment tool for in-service English language teachers based on global continuing professional development (CPD) framework including effective teaching elements such as *planning lessons and courses* and *managing lessons*. The tool was created in reference to the European Portfolio for Student Teachers of Languages (EPOSTL) (Newby, Allan, Fenner, Jones, Komorowska & Soghikyan, 2007) that is a self-assessment tool for pre-service language teachers including 193 descriptors of language teaching related abilities. In the process, 1716 teachers of English took part in the reliability analyses of 48-item tool as the participants. Yet, Borg and Edmett (2018) stated that the tool needs to be developed and adapted considering the participants' feedback.

Considering the proposed significance of limiting scope of self-efficacy and focusing on subject and context specificity aspect of self-efficacy, the current study aims to develop a scale which is specific to pre-service and in-service language teachers' efficacy beliefs.

Studies Related to Self-Efficacy

Self-efficacy has been a prominent concept in educational psychology and studies on it have commonly been in association with student motivation and achievement in specific task performance (eg., Bandura, 1993; Moulton, Brown, & Lent, 1991; Pajares, 1996; Schunk, 1990; Zimmerman, 2000). To this end, Bandura,

Barbaranelli, Caprara and Pastorelli (1996) stated that self-efficacy beliefs influence students' career plans in a positive way based on the findings of a study carried out with 279 children in their teens in Rome.

Another study on the relationship between self-efficacy and academic achievement was by Chemers, Hu and Garcia (2001), who investigated effects of self-efficacy and positive attitudes on first year students' achievement and their health through a longitudinal study design. The findings suggested that students' self-efficacy beliefs and positive attitudes were highly associated with academic achievement and health especially coping with stress. Similarly, Bong's (2004) study with 389 high school students in Korea on motivation, attributional beliefs, task specificity and self-efficacy stated that while academic achievement was correlated with self-efficacy, attributional beliefs or any subject matter did not play a significant role in students' motivation.

Regarding the connection between self-efficacy and achievement, Hsieh, Sullivan and Guerra (2007) compared self-efficacy beliefs and academic goal orientation of students with high and low achievement levels. The quantitative study was carried out with 112 undergraduate students who had either lowest (*N*=60) or highest (*N*=52) GPA scores by employing two questionnaires on self-efficacy and academic goal orientation. The findings of this study indicated that students with high-level of academic achievement had stronger self-efficacy beliefs and adopted more mastery goals, thus suggesting that there was a strong relationship between self-efficacy and academic achievement.

It has also been suggested that self-efficacy beliefs lead to use of self-regulatory strategies while performing abilities and skills, thus, self-efficacy beliefs foster students' memory (eg., Bouffard-Bouchard, Parent, & Larivée, 1991**;** Schunk, 1985; Zimmerman & Martinez-Pons, 1990). From that perspective, students with a high level of self-efficacy use more cognitive skills and metacognitive strategies than the students with a low level of self-efficacy.

With respect to observing students' use of strategies and other cognitive skills, math self-efficacy is the most preferred course in the literature. In other words, self-efficacy studies have commonly been conducted on math self-efficacy. For

instance, Hackett and Betz (1989) explored whether there was any relationship between self-efficacy beliefs and math performance. The study that was conducted with 262 university students in the USA revealed that there was a strong relationship between good or bad math performance and high/low levels of self-efficacy. Similarly, Pajares and Miller (1994) highlighted the relationship between self-efficacy and math performance in a study carried out with college students. That study revealed that self-efficacy led to better math performance. Overall, it is suggested that beliefs are of major importance in determining academic achievement.

Students' self-efficacy was also investigated in Choi's (2005) study that focused on specific self-efficacy concepts such as general and academic self-efficacy. The study that was carried out with 230 college students suggested that these concepts were important factors for self-efficacy research since the relationship was strong when self-efficacy measures were specific and close. Moreover, it was found out that academic self-concept was highly related with student achievement.

Sources of self-efficacy for learning have also been addressed in a number of studies in the literature (e.g., Joet, Usher & Bressoux, 2011; Phan & Ngu, 2016). For instance, Joet, Usher and Bressoux (2011) examined effect of sources of self-efficacy on beliefs about academic achievement and self-regulation taking the variable of gender into account in a study conducted in French context with 395 elementary school students. The courses of French and math were considered addressing self-regulated learning. The findings of the study suggested that *mastery experiences*, *social persuasion* and *physiological arousal* were effective sources of self-efficacy for self-regulated learning. As for gender as a potential effective factor, it emerged that while boys were better in math and had higher self-efficacy beliefs, girls were better in French, but had a lower level of self-efficacy than boys, suggesting that gender is an effective background factor in self-efficacy beliefs.

Phan and Ngu (2016) explored sources of self-efficacy and whether there was a relationship between self-efficacy and student achievement in a quantitative study carried out with 328 elementary school students at three intervals mainly focusing on the effect of enactive learning experience in changing time. At Time 1,

enactive learning experience and *vicarious experiences* influenced self-efficacy while at time 2, enactive learning experience was influential. At time 3, *verbal persuasion, emotional and physiological states* were effective in self-efficacy. Meanwhile, it emerged that there was a significant relationship between self-efficacy and student achievement during all of the measures. As a conclusion, the findings suggested that while sources of self-efficacy for learning changed, a relationship between self-efficacy and student achievement was undeniable.

In the field of EFL, one of the studies on the sources of self-efficacy in language learning was conducted by Zhang and Ardasheva (2019). The participants of the study that aimed to look into the effect level of sources of self-efficacy (*mastery experience, vicarious experience, verbal persuasion and physiological and affective states*) on self-efficacy related to English public speaking were 263 adult Chinese EFL learners at a college. The results of this quantitative study suggested that all of the sources except for physiological and affective states affected self-efficacy related to English public speaking.

Studies Related to Teacher Self-Efficacy

As efficiency of teachers in educational programs is of great significance; any factors that possibly influence it have been investigated and discussed in teacher education research as well. Thus, in the literature, teacher self-efficacy has been associated with varied concepts; teaching experience (e.g., Chen & Yeung, 2015); classroom management and student achievement (eg.,Caprara, et al, 2006; Tschannen-Moran & Hoy, 2007); student motivation(eg., Mojavezi & Tamiz (2012) teacher burn-out (eg., Skaalvik & Skaalvik, 2007; 2010); commitment to teaching (eg., Chesnut & Burley, 2015), job satisfaction, well-being and quitting intentions (eg., Wang, Hall & Rahimi, 2015; general pedagogical knowledge (Lauermann & König, 2016), career adaptability and etc. (eg., McLennan, McIlveen & Perera, 2017) in different branches of teaching (eg., Guo, Justice, Kaderavek & Pista, 2010 for preschool teaching; Morris, Lummis, McKinnon & Heyworth, 2017 for music and visual arts).

Studies have also focused on the sources of self-efficacy. To start with, Tschannen-Moran and Hoy (2007) addressed the sources of teacher self-efficacy

beliefs. The study was conducted in two universities in Ohio, and one university in Virginia with the participation of 255 graduate students and teachers at elementary and high schools. The purpose of the study was to evaluate the sources of self-efficacy beliefs among novice and experienced teachers. The study also explored whether there was a difference between novice and experienced teachers in terms of the source of their self-efficacy beliefs. Surveys that included components of self-efficacy beliefs such as *mastery* and *vicarious experiences* were administered as data collection instruments. Data analyses revealed that *mastery experiences* and support played a significant role in the self-efficacy beliefs of novice teachers while these contextual factors were less important for experienced teachers.

Another study on the sources of teacher self-efficacy was conducted by Clark and Newberry (2019) with the participation of 783 pre-service teachers from nine teacher education programs in the USA in their last year of training. The study that was in a quasi-experimental design aimed to explore sources of these teachers' perceived self-efficacy beliefs. The findings suggested that all sources of self-efficacy included in the study; *mastery experience, vicarious experience and verbal persuasion* were effective in the self-efficacy beliefs of pre-service teachers. Yet, the effect size was lower than estimated, thus, indicating that there might be other effective factors which are to be investigated.

One of the recent studies on the sources of teacher self-efficacy was conducted by Yada, Tolvanen, Malinen, Imai-Matsumura, Shimada, Koike and Savolainen (2019), who compared two countries; Japan and Finland on the related issue. The study was carried out with 261 Japanese and 1123 Finnish teachers through a quantitative study. The results suggested that *mastery experiences* were the main source of teacher self-efficacy for both groups. Yet, *verbal persuasion* differed in the two countries: While it was a highly important source of self-efficacy for Finnish teachers, the effect was not significant for Japanese teachers. Overall, the study suggested that socio-cultural factors might influence the source of self-efficacy for teachers.

The impact of socio-cultural factors as part of *social persuasion* as the main source of teacher self-efficacy was also stressed in the study of Tschannen-Moran and Johnson (2011). The researchers examined literacy teachers' self-efficacy

beliefs in various districts of the USA. 648 teachers participated in the research and the results indicated that *verbal persuasion* and *vicarious experiences* are important in shaping efficacy beliefs of literacy teachers and the researchers suggested that the factors affecting teachers' efficacy beliefs be further examined, which is one of the focuses of this study.

Despite limited number of them, studies have focused on a comparison between pre-service and in-service teachers' self-efficacy beliefs. For instance, Campbell (1996) explored any possible differences between pre-service and in-service science teachers comparing teachers in Scotland and the U.S.A. The findings of the study indicated that even though there was no significant difference between teachers in the two countries in their self-efficacy beliefs, the difference between pre-service and in-service teachers was statistically significant since in-service teachers in the study had higher levels of self-efficacy than pre-service teachers. As for function of demographic factors, it emerged that years of experience and age were effective factors in the difference.

Tschannen-Moran and Hoy (2007) examined novice and in-service teachers' self-efficacy beliefs considering sources and factors affecting those beliefs. The study was conducted with 255 novice and experienced teachers by employing *TSES* (Tschannen-Moran & Hoy, 2001). On overall efficacy, the data revealed that experienced teachers had higher levels of self-efficacy especially for the components of instructional strategies and classroom management than novice teachers. Furthermore, it was suggested that compared to novice teachers', experienced teachers' self-efficacy beliefs were not influenced by contextual factors, and, thus, the main source of their self-efficacy was *mastery experiences* while it was mainly *social persuasion* for novice teachers.

Supporting the effect of experience in the difference between pre-service and in-service teachers, Chan (2008) searched for self-efficacy beliefs of 273 Chinese pre-service and in-service teachers with regard to aspects of varied types of efficacy; two global *(general and collective)* and seven domain-specific teacher self-efficacy beliefs (*teaching highly able learners, classroom management, guidance and counseling, student engagement, teaching to accommodate diversity, teaching for enriched learning, and working with colleagues and parents)* by developing and

administering scales on these aspects. Data analysis suggested that teachers' highest level of self-efficacy was for *teaching highly able students* and lowest level of self-efficacy for *classroom management.* As for the differences between the two groups in their self-efficacy beliefs, data revealed that experienced teachers had significantly higher levels of self-efficacy beliefs than pre-service teachers and concluded that the study did not support the assumption that pre-service teachers could have unrealistically high levels of efficacy beliefs, and experience is a factor increasing self-efficacy beliefs.

Being a crucial issue to better understand the nature of teachers' self-efficacy, factors influential in it are suggested to be of major importance. Despite the need for further studies, there has still been research on the possible factors affecting teacher self-efficacy. One of these studies was conducted by Knoblauch and Chase (2015), who investigated school setting as a potential factor for teacher self-efficacy beliefs of pre-service teachers in the USA. 368 pre-service teachers who had previous learning experiences at rural, suburban and urban schools and had teaching experiences as part of their teacher education participated in the study, and their self-efficacy beliefs were compared. Accordingly, all groups reported higher self-efficacy beliefs after they experienced teaching and external factors were suggested to be effective in shaping those beliefs. Yet, there were differences among the three background groups. Prospective teachers of urban and rural areas where there are more challenges had lower levels of self-efficacy.

In a previous study, Knoblauch and Hoy (2008) explored contextual factors effective in perceived self-efficacy beliefs of 102 pre-service teachers. School setting was the target variable of the study associated with teacher self-efficacy beliefs. Prospective teachers practicing teaching in rural, suburban and urban areas and mentored by a teacher were administered scales on collective self-efficacy and cooperating teacher self-efficacy before and after teaching practices. The results of the data analyses indicated that self-efficacy beliefs in the three groups increased dramatically in the process and school setting was an influencing factor for collective self-efficacy considering that pre-service teachers in urban areas had lower levels of self-efficacy than the other two groups.

Pendergast et al., (2011) searched for self-efficacy beliefs of beginning pre-service teachers studying at three postgraduate programs of teaching at an Australian university by focusing on any effect of training on these teachers' self-efficacy beliefs. Data of the study designed in a longitudinal and quantitative method were collected through *TSES* (Tschannen-Moran & Hoy, 2001) at the beginning and the end of the first year of training. Identity data that focused on how the participants perceived to be a teacher were related to the results of *TSES* (Tschannen-Moran & Hoy, 2001), and data analysis suggested that while the level of efficacy beliefs were higher before starting to teaching practice probably caused by the effect of positive emotional persuasion, the levels relatively decreased at the end of classroom teaching practices, which could be result of contextual factors. Furthermore, the study revealed no effect of demographic factors of age, gender and program.

Social working conditions were also found to have an impact on self-efficacy beliefs of beginning teachers by Devos, Dupriez, and Paquay (2012). The researchers conducted a study with 110 beginning teachers (in the first year of teaching) in Belgium and stated that mastery goals and school climate are connected to both teacher self-efficacy and depression. While a positive school climate leads to high level of teacher self-efficacy, negative circumstances at school lead to beginning teachers' depression.

Chen and Yeung (2015) conducted research with 20 participants who were graduates of a language teacher education program in China. The purpose of the study was to explore factors effective in the participants' self-efficacy beliefs in a qualitative study. The researcher categorized emerging factors in three groups; teacher factors (language proficiency and teaching experience, student factors (classroom management) and contextual factors (culture and environment). It emerged that teacher factors included basically teacher proficiency in the target language; student factors involved students' positive feedback for teachers and their motivation. As for contextual factors, the study revealed that culture, class size and school district were among contextual factors influencing teacher self-efficacy beliefs.

Ma and Cavanagh (2018) presented previous research suggesting demographic factors (eg., subject and school levels; previous extracurricular

experience) and teacher education programs providing coursework and teaching experience as effective factors on pre-service teachers' self-efficacy beliefs. In addition, Ma and Cavanagh (2018) explored self-efficacy beliefs of 90 secondary pre-service teachers through a mixed-study design (a survey and interviews) and found out that the participants of the study had a low level of teacher self-efficacy particularly for classroom management mainly caused by discrepancy between theoretical courses in teacher education and actual classroom practices, which was stated by the participants during interviews. Other factors influencing pre-service teachers' efficacy beliefs were reported to be lack of experience, personal qualities and teacher-student interaction.

As for aspects of language teachers' self-efficacy, sources of EFL teachers' efficacy beliefs have been addressed. For instance, Phan and Locke (2015) investigated major source of self-efficacy beliefs for Vietnamese EFL teachers through a qualitative study consisting of interviews and journal writing. Eight teachers participating in the study stated that their main source of self-efficacy is *social persuasion* followed by *vicarious experiences* and *physiological/affective states*, which suggests that there is a variety in the results of research on the source of teachers' self-efficacy beliefs in the literature. Thus, as also suggested by Tschannen-Moran and Johnson (2011), possible factors influencing teachers' self-efficacy are necessary to be explored.

Concerning language teachers' self-efficacy and the factors effective in it, studies have been conducted on general aspects of EFL teachers' perceived self-efficacy, and language proficiency and culture have been proposed to be among factors influencing their self-efficacy (eg., culture, (eg., Chacón, 2005; Chen & Yeung, 2015; Eslami & Fatahi, 2008; Phan & Locke, 2015; Wyatt, 2018). In that respect, Chacón (2005) investigated self-efficacy beliefs of 100 in-service EFL teachers in Venezuela through a scale developed by the researcher and still commonly used in the related literature. Findings of that study suggested that the participants' perceived self-efficacy for the component of instructional strategies was higher than student engagement or classroom management, and self-reported language proficiency was positively related to self-efficacy beliefs of those EFL teachers.

Eslami and Fatahi (2008) replicated Chacón's (2005) study in Iranian context with 40 in-service EFL teachers who had 1-5 years of experience in teaching by using scale of Eslami-Rasekh and Valizadeh (2004) on self-efficacy of EFL teachers. The findings of this study were in line with the study of Chacón's (2005) in that levels of teacher self-efficacy were higher for instructional strategies, and self-reported language proficiency was found to result in high-level of teacher self-efficacy.

Choi and Lee (2016) also probed whether language proficiency has an impact on self-efficacy of nonnative EFL teachers. The participants were 167 EFL teachers at secondary school in Korea. The data were collected through self-reports on how these teachers consider their language proficiency and a questionnaire about self-efficacy beliefs. The results suggested that the two variables were highly connected issues and L2 proficiency was a significant factor of EFL teachers' self-efficacy beliefs.

Apart from the research on the sources of teachers' self-efficacy beliefs and the factors affecting it both in EFL context and various branches of teaching, there have been many attempts to research the connection between self-efficacy and varied elements. With respect to the relationship between teachers' self-efficacy and burn-out, Caprara, et. al., (2006) focused on teacher self-efficacy beliefs of in-service teachers in their study. The study was conducted in 75 Italian high schools with more than 2000 teachers. The purpose of the study was to examine (if any) the connection between teacher self-efficacy, job satisfaction and student achievement. Data were collected through self-report questionnaires, and students' grades were compiled in two academic years. Statistical analyses suggested that there was a significant relationship among the variables of the study. In other words, the level of self-efficacy beliefs led to an increase or decrease in job satisfaction and student achievement.

Burn-out has been a highly associated concept with teacher self-efficacy. For instance, Schwarzer and Hallum (2008) conducted a study through two phases; Study I with 1203 in-service teachers and Study II with 458 in-service teachers, and it emerged that teachers with a low level of self-efficacy reported more burn-out and stress than their colleagues who were with a high level of self-efficacy, which

basically highlights the importance of sense of self efficacy in teacher education or teaching. Yet, experience had no effect on the connection between self-efficacy and burn-out as young teachers had higher burn-out levels.

Skaalvik and Skaalvik (2010) conducted a study on the relationship between teacher-self-efficacy and burn-out in a Norwegian context. In the study, 2249 teachers in 113 schools of basic education were recruited as participants and they reported their beliefs through a teacher-self efficacy scale. The purpose of the study was to put forward any relationship between teacher-self efficacy, social context, job satisfaction and burn-out. It emerged that there was no positive relationship between self-efficacy beliefs and teacher burn-out.

Klassen and Chiu (2010) investigated the relationship between self-efficacy beliefs and types of job stress or job satisfaction accompanied by a number of factors; gender and years of experience. The results of this quantitative study conducted with 1430 teachers suggested that while levels of self-efficacy beliefs increased from early career to ensuing years, it decreased through the end of teaching career. Furthermore, it emerged that female teachers had lower levels of self-efficacy especially concerning classroom management, but higher levels of stress than male teachers caused by their efficacy beliefs indicating gender as an effective factor for the two variables; teacher self-efficacy and burn-out. Thus, it could be beneficial to investigate whether these findings are applicable to Turkish setting, particularly to the field of ELT, which is one of the purposes of the current research.

Another concept suggested to be related to teacher self-efficacy is student motivation (eg., Duffin, French & Patrick, 2012; Mojavezi & Tamiz, 2012). For example, Mojavezi and Tamiz (2012) investigated if there was a relationship between teacher self-efficacy beliefs and student motivation. The study was conducted with 80 high school teachers and 50 high school students in Iran through quantitative study design by using two scales on the variables, and data analysis suggested that teachers' high-level of self-efficacy beliefs is significantly related to student motivation.

Chesnut and Burley (2015) reviewed literature for the relationship between teacher self-efficacy and commitment to teaching in a way that compares pre-service and in-service teachers through meta-analysis of 33 studies. The researchers suggested that accuracy of measures be considered to interpret the results of studies, but there is still a significant relationship between teacher self-efficacy and commitment to teaching. On the comparison of both groups, it emerged that in-service teachers had higher levels of self-efficacy and commitment to teaching even though the difference between these groups was not very significant.

One of the recent studies on the relationship between teacher self-efficacy and varied concepts one of which is general pedagogic knowledge was conducted by Depaepe and König (2018) through a quantitative research design. The study was conducted with 342 pre-service teachers in Germany. In order to address general pedagogical knowledge, the researchers used a paper-pencil test on teaching math created by König, Blömeke, Paine, Schmidt and Hsieh (2011) while they used self-efficacy scale of Pfitzner-Eden et al., (2014). The study revealed no significant relationship between teacher self-efficacy anf pedagogical knowledge of pre-service teachers.

Now that there is a difference in self-efficacy beliefs between novice and experienced teachers, it is likely to be a change in the years between being a novice and experienced teacher. The change in the levels of self-efficacy beliefs when starting to profession has been considered as highly important and has been the focus of various studies (eg., Atay, 2007; Hoy & Spero, 2005; Pfitzner-Eden, 2016; Wang, et al., 2015; Yüksel, 2014). With regard to probability of this change, one of the studies was conducted by Hoy and Spero (2005), who aimed to explore changes in efficacy beliefs between enrollment to a teacher education program and starting to profession through a quantitative study design. The result of the study suggested that level of self-efficacy was high during education years while it dropped in the first year of teaching.

Regarding change in the self-efficacy beliefs, Palmer (2006) examined durability of changes by conducting a research with 55 pre-service primary teachers in Australia through a pre-test, immediate and delayed post-test design. The changes were tracked related to a science-methods course by using surveys and

interviews. The participants concurrently had teaching practice through practicum. Surveys were administered before and after the course whereas interviews were conducted with the participants nine months later in order to examine delayed change of beliefs. Overall findings of the study indicated that the level of self-efficacy beliefs increased gradually and practicum had a positive effect on the participants' teacher self-efficacy beliefs.

Change in the level of teacher self-efficacy was also set forth by Pfitzner-Eden (2016) through a longitudinal study. The study was carried out at a German university through three studies from two samples; advanced (*N*=352) and beginning prospective teachers *(N*=559) at three different times. The change was tracked during coursework in which theoretical courses were provided to beginning pre-service teachers and practicum which provided an opportunity to advanced pre-service teachers for practice teaching skills. As for the findings, the researcher found that high-level of teacher self-efficacy during practicum led to decrease in the levels of intention to quit the profession in the first year of teaching. Furthermore, while beginning teachers' self-efficacy related to classroom management were high at the beginning of the studies and changed later, advanced pre-service teachers' self-efficacy related to classroom management and instruction increased during studies. The contrast in the difference between the two groups was suggested to stem from professional experience through years and course content.

In addition to the research conducted on the variables and the change in the levels of teacher self-efficacy around the world, studies in various fields of teaching have been conducted in Turkey. For example, Sarıçam and Sakız (2014) explored teacher self-efficacy beliefs and burn-out among special education, music and primary education teachers in Turkey considering independent variables of gender and department. The purpose of the study was to examine the relationship between these elements. The participants were 118 teachers working in various departments of special education. Data were collected through *Teachers' Sense of Efficacy Scale* (Tschannen-Moran & Hoy, 2001) and a burn-out scale. Findings revealed that there was a significant relationship between teacher self-efficacy beliefs and burn-out. While there was no difference among gender groups related to teacher self-efficacy, it emerged that special education teachers had higher levels of self-efficacy than the

other two groups, suggesting department as an effective demographic factor. As for the findings on burnout, the data revealed that female participants had higher levels of burnout, and special education teachers had lower levels of burnout, which suggests that department led to a difference in both teacher self-efficacy beliefs and burnout.

Akçali (2017) focused on teacher self-efficacy beliefs through a mixed-method study the purpose of which was to analyze self-efficacy beliefs and motivation of pre-service history teachers. For this purpose, 40 pre-service history teachers in two teacher education programs in Turkey were pooled as participants of the study the data of which were collected through a self-efficacy questionnaire including open-ended questions and interviews. As for the findings, it emerged that the participants had a high level of teacher self-efficacy and motivation that were found to be related, but the level of participants' self-efficacy beliefs and motivation in history teaching were higher than the level of self-efficacy and motivation in teaching as a general profession, which emphasizes the effect of subject matter and specificity of teaching related capabilities on self-efficacy.

Comparison between pre-service teachers and in-service teachers in self-efficacy beliefs has also been addressed in Turkish studies, one of which was conducted by Azar (2010), who explored whether there were any differences between pre-service(*N*=50) and in-service secondary science teachers (*N*=75) through a quantitative study design. Data analyses suggested that there was no significant difference between the two groups in perceived levels of their efficacy beliefs regardless of gender, any change or years of experience.

In language teaching research in Turkey, studies have been conducted on the general aspects of language teaching, sources of efficacy, changes in EFL teachers' self-efficacy beliefs and associated factors with efficacy beliefs. For instance, Inceçay and Dollar (2012) explored teacher self-efficacy beliefs of English language teachers. The purpose of the study was to investigate readiness of pre-service English language teachers and their capabilities in classroom management. Participants were 36 pre-service teachers at a foundation university in Turkey. Data were collected through *Teachers' Sense of Efficacy Scale* (Tschannen-Moran & Hoy, 2001), a scale for teacher readiness and an observation scale. Data analysis

of the study indicated a significant relationship between classroom management and teacher self-efficacy.

Change in the levels of self-efficacy beliefs has also been addressed in Turkish context. To this end, Atay (2007) explored change of pre-service English language teachers' (*N*=78) self-efficacy beliefs throughout practicum process in a mixed-method study. Quantitative data collected were analyzed considering components of teacher self-efficacy (instructional strategies, classroom management and student engagement) whereas qualitative data collected through focus-group interviews aimed to support the data by looking into the factors influencing self-efficacy beliefs of pre-service teachers. The findings indicated a positive change in the beliefs regarding *instructional strategies* and *student engagement* as a result of practicum. Qualitative data of the study supported Bandura's (1978) sources of self-efficacy in that self-awareness about strengths and weaknesses and also observing others were found to be significant sources of teacher self-efficacy by the participants. The participants also stated that instructional strategies that they had learned in their methodology courses were useless considering their previous learning experience. Overall, the study indicated a positive change in pre-service EFL teachers' efficacy beliefs, effect of self-efficacy sources on these teachers' beliefs and a mismatch between theory and practice stated by pre-service teachers.

Later, Şahin and Atay (2010) explored changes in pre-service EFL teachers' self-efficacy beliefs in their training years and induction year. The study was conducted with 27 participants in a longitudinal mixed-study design the data of which were collected through TSES (Tschannen-Moran & Hoy, 2001) and open-ended questions. The results of quantitative data revealed that while instructional strategies had higher values than classroom management and student engagement, overall levels of self-efficacy beliefs increased linearly from training years and decreased slightly through the end of induction year, which could be explained by the fact that the teachers experiencing real classroom conditions might need more support to achieve teaching related tasks. As for the sources of efficacy beliefs of these teachers, qualitative data suggested that *social persuasion, enactive mastery* and *vicarious experiences* emerged as the main sources.

Yüksel (2014) probed changes in the beliefs of pre-service EFL teachers in a longitudinal study lasting for a year in association with possible effect of sources of efficacy in a Turkish context with participation of 40 prospective teachers who were in their final year of training, and they had school observation in which they observed a mentor teacher and teaching practice in which they taught classes of that mentor teacher as part of their training. Data were collected through Turkish adapted version of *Teachers' Sense of Efficacy Scale* (Tschannen-Moran & Hoy, 2001) by Çapa et al. (2005) by administering the scale at three times for the search for change; before and after observations and after teaching practice. The participants were asked to write reflections on their teaching experiences at the end of their training that aimed to focus on possible sources for their efficacy beliefs. The findings of the mixed-method study suggested that the participants' efficacy beliefs changed through the stages of the study: While levels of efficacy decreased from *before observation* phase to *after observation phase,* they increased through the end of their teaching practices. As for the sources for teacher self-efficacy, it emerged that *mastery experiences* and *social persuasion* were the main sources.

In a later attempt, Alagözlü (2016) explored pre-service EFL teachers' self-concepts basically efficacy beliefs regarding their proficiency in the target language. The study carried out with 153 second grade student-teachers at a state university in Turkey by administering adapted form of *TSES* (Tschannen-Moran & Hoy, 2001) and self-reported proficiency scale by Chacón (2005). The findings revealed that participants had a high level of efficacy beliefs for their teaching abilities, classroom management and instructional strategies, and their language proficiency was also high, making implications for their ability in regulating cognition.

On the comparison between pre-service and in-service teachers, Dolgun and Caner (2019) investigated whether there were similarities or differences between pre-service and in-service EFL teachers' self-efficacy in Turkey. The data of that study were collected from 180 EFL teachers in total; prospective (*N*=75) and experienced (*N*=105) EFL teachers and through adapted version of *TSES* (Tschannen-Moran & Hoy, 2001) by Çapa et al., (2005) and results suggested that there was a very slight difference between the two groups in overall score of self-efficacy in favor of pre-service teachers. Furthermore, data on the sub-scales of self-

efficacy indicated that in-service teachers had higher levels of self-efficacy for classroom management than pre-service teachers, but they had lower scores for student engagement than pre-service teachers did.

Turkish EFL studies also focused on self-efficacy beliefs of either pre-service or in-service EFL teachers as function of demographic factors. In this sense, one of the studies was conducted by Merç (2015) who examined whether there was a relationship between speaking anxiety and self-efficacy beliefs of pre-service EFL teachers in Turkey through a mixed-study design in light of gender and school setting variables. Participants of the study were 117 senior pre-service teachers at ELT department who had also teaching practice through practicum. Scales on foreign language speaking anxiety and teacher self-efficacy were administered to the participants and they were followed by interviews. The findings of the study suggested that there was an inverse relationship between self-efficacy beliefs and speaking anxiety: While the participants reported a low level of speaking anxiety, the level of their self-efficacy beliefs was found to be low. Moreover, gender and school setting in which pre-service teachers practiced teaching had no influence on their self-efficacy and foreign language speaking anxiety.

Ercan-Demirel (2017) examined pre-service EFL teachers' self-efficacy beliefs in consideration of gender and age variables. The study was conducted with 208 senior students differing in gender and age in ELT department of two state universities in Turkey by administering adapted version of *TSES* (Tschannen-Moran & Hoy, 2001) by Çapa et al. (2005). Overall finding of that study was that pre-service teachers had a high level of self-efficacy for their future teaching career. On function of demographic factors, it emerged that while gender was not effective in the difference between female and male teachers in their efficacy for instructional strategies and classroom management, there was a difference in the levels of self-efficacy for student engagement in favor of female teachers. Yet, concerning the findings in relation to age variable, it was found out that there was no significant difference among age groups.

Sevimel and Subasi (2018) explored the factors affecting perceived levels of self-efficacy beliefs of pre-service EFL teachers in a Turkish context. The data of the study which was in a mixed-study design were collected from 113 pre-service

teachers at a state university through a scale and focus-group interviews. Analyses of the data revealed that there were four factors affecting teacher self-efficacy beliefs of pre-service teachers; their undergraduate education, practicum, language proficiency and also feelings and moods. The participants of focus-group interviews indicated that education that they got at university had a bad effect on their efficacy beliefs as it was mostly theoretical, thus, did not reflect real classroom setting. Yet, practicum in which they had opportunity to practice teaching skills was asserted to affect their beliefs positively. As for the sources of their self-efficacy beliefs, Sevimel and Subasi (2018) suggested that the participants' responses referred to Bandura's (1997) sources of self-efficacy; *enactive mastery experiences*, *social/verbal persuasion* and *vicarious experiences* as the main sources of efficacy.

Even though it has been considerably investigated in other fields of teaching around the world; (eg., Akçali, 2017; history; science teaching; Desouza, et al., 2004; agriculture; Swan, et al. 2011) to a great extent and the studies have generally been on in-service teachers, teacher self-efficacy in language teacher education has not been a fully understood issue to the knowledge of the researcher, which leads to one of the focuses of the current research.

Metacognitive Awareness

One of the concepts that could be considered as related to teacher self-efficacy is metacognitive awareness defined as higher order skills consisting of declarative knowledge, procedural knowledge, conditional knowledge and also strategies of planning, comprehension monitoring, debugging and evaluation (Schraw & Dennison, 1994). Metacognitive awareness or metacognition that was introduced by Flavell (1976) are two words for the same phenomena. Metacognition was later defined as "knowledge and cognition about cognitive phenomena" and involved *knowledge of strategy*, *task,* and *one's own cognition* (Flavell, 1979, p. 906). A more recent definition was provided by Hacker (1998), who stated that "metacognition includes both knowledge of one's knowledge, processes, cognitive and affective states, and the ability to consciously and deliberately monitor and regulate one's knowledge, process, and cognitive and affective states" (p. 11). Subsequently, cognitive sciences scholars provided congruent definitions for metacognition such as "awareness and management of one's own thought" (Kuhn

& Dean, 2004, p. 270) and “the monitoring and control of thought” (Martinez, 2006, p. 696). To conclude, it could basically be defined as “thinking about thinking” (Livingston, 2003, p. 3)

Being abstract, metacognition has always been regarded as an obscure concept in the literature (eg., Livingston, 2003; Schoenfeld, 1987; Scott & Levy, 2013). To this end, it has been proposed that the concept could also be confused with “cognition” (e.g., OECD, 2014). However, the difference between the two concepts was embodied well in the OECD (2014) document: While trying to remember an address or pin code is a cognitive function, being aware of strategies to be used to remember that address or pin code is metacognitive. Similarly, solving a math problem is cognitive whereas choosing the best option that could work best to solve that problem is a metacognitive process.

Thus, there has been variation in the definitions and components proposed and perceptions about metacognition. According to Moritz and Lysaker (2018), even though the term of “metacognition” is new, the concept dates back earlier times, so “monitoring” (Hart, 1967 in Moritz & Lysaker, 2018); knowledge about knowledge (Tulving & Madigan, 1970 in Moritz & Lysaker, 2018) and even Plato’s “cognizing about cognition” (Spearman, 1923, pp. 52-53 in Moritz & Lysaker, 2018, p. 20) refer to the same concept; metacognition. Above all, there is one property in common: All of these concepts have focused on human agency that thinks about his/her own thinking (Hacker, Dunlosky & Graesser, 2009). In addition to various definitions, terms that might be interchangeably used for metacognition have been provided in the literature. *“Control processes”* (Atkinson & Shiffrin, 1968) *“Self-regulation”* (eg., Paris & Paris, 2001, Zimmerman, 1990; Zimmerman & Schunk, 2001) and *“executive control”* (eg., Miyake & Shah, 1999; Rubinstein, Meyer & Evans, 2001), *“metamemory”* (Shimamura & Metcalfe, 1994) are some of these terms used for metacognition and preferred by scholars in the literature. “*Metacognition”* and *“metacognitive awareness”* are used within the scope of this study. Overall, two aspects of metacognition have been emphasized in the literature: *metacognitive knowledge* and *metacognitive regulation* (eg., Brown, 1987; Flavell, 1987; Schraw & Dennison, 1994). (See Figure 5)

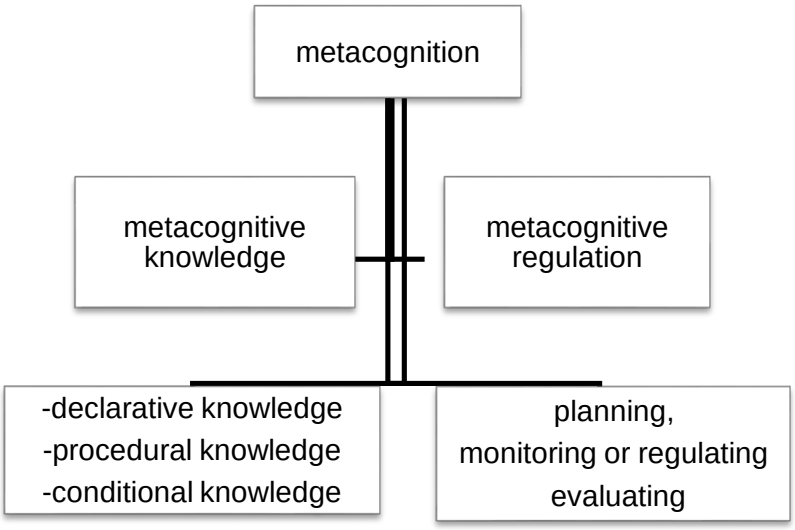

Figure 5. Components of metacognition.

One of the two components*, metacognitive knowledge* is comprised of *declarative, procedural* and *conditional knowledge* (Kuhn & Dean, 2004; Schraw & Dennison, 1994; Schraw & Moshman, 1995; Schraw, Crippen, & Hartley, 2006). *Declarative knowledge* refers to the knowledge of "what" whereas *procedural knowledge* refers to the knowledge of "how". In other words, *declarative knowledge* is knowing about things; asking the question of "Do I know this?" (Paris & Winograd, 1990) and *procedural knowledge* is knowing how to do things, manage cognition; asking the question of "How can I make use of this knowledge?". The other type of *metacognitive knowledge* is *conditional knowledge* that is related to reasoning and timing of the cognition since it answers the questions of "why" and "when".

Metacognitive regulation, the other component of metacognition, refers to cognitive activities enabling individuals to organize their knowledge which are *planning*, *monitoring or regulating* and *evaluating* (Hartman, 1998; Paris & Winograd, 1990; Schraw & Moshman, 1995; Schraw et al., 2006). *Planning* includes selection and use of appropriate strategies and resources that could influence performance, and *monitoring* refers to individuals' awareness of their performance. Ultimately, *evaluation* refers to "appraising the products and regulatory processes of one's learning" (Schraw et al., 2006, p. 114).

Metacognitive knowledge and *regulation* are two components that are commonly agreed on among researchers. Additionally, Flavell (1979) indicated that metacognition functions through its four main components which are *metacognitive*

knowledge, *metacognitive experiences*, *goals (or tasks)* and *actions (or strategies)*. According to Flavell (1979), *metacognitive knowledge* refers to "the stored world knowledge that has to do with people as cognitive creatures and with their diverse cognitive tasks, goals, actions and experiences" (p. 906) and it involves social cognition aspects such as acquired beliefs about oneself and other people in the society. Furthermore, Flavell (1979) suggested that variables of the cognition in social enterprises are categorized as *person*, *task* and *strategy*. In other words, the nature of any social cognitive interaction is influenced by the people involved, information necessary in a cognitive function and strategies used in the process. A student trying to solve a math problem by using alternative techniques could be an example of the cognitive process aforementioned. Moreover, Livingston (2003) exemplified the variables of metacognition as follows:

> *Knowledge of person*: you may be aware that your study session will be more productive if you work in the quiet library rather than at home where there are many distractions
> *Knowledge of task*: you may be aware that it will take more time for you to read and comprehend a science text than it would for you to read and comprehend a novel
> *Knowledge about strategy:* knowledge about both cognitive and metacognitive strategies, as well as conditional knowledge about when and where it is appropriate to use such strategies (Livingston, 2003, p. 3).

While *metacognitive knowledge* refers to social cognition beliefs, *metacognitive experiences* refer to actual conscious cognitive experiences including feelings, attitudes and thoughts. According to Efklides (2006), *metacognitive experiences* are related to individuals' judgments or feelings such as judgement about correction or feelings of satisfaction and confidence. Finally, *goals* are objectives in any social cognitive initiative and *actions* are behaviors in line with those objectives. Flavell (1979) exemplified these two components as asking a question (*actions*) for a purpose (*goals*). Even though classification and categories of metacognition are diverse, the consensus is that being aware of one's own knowledge and knowing how to apply this knowledge into practice is beneficial to learners, which is supported by studies in the literature.

Turning theory into practice, scholars have provided explanations and examples how metacognitive awareness is reflected into real classroom setting (eg., Anderson, 2002; Pintrich, 2002). In this sense, Flavell (1976 in OECD, 2014)

explained metacognition in an example: “I am engaging in metacognition if I notice that I am having more trouble learning A than B; if it strikes me that I should double-check C before accepting it as a fact (Flavell, 1976, p. 232, in OECD, 2014, p. 36). Similarly, Dirkes (1985 in Blakey & Spence, 1990) suggested that relating new information to background knowledge, choosing appropriate strategies on purpose; planning, monitoring, and evaluating thinking processes are among basic metacognitive strategies. With regard to metacognitive awareness in learning, Flavell (1979) stated that metacognitive awareness influences success in “…oral communication of information, oral persuasion, oral comprehension, reading comprehension, writing, language acquisition, attention, memory, problem solving, social cognition, and, various types of self-control and self-instruction” (p. 906).

More recently, Pintrich (2002) explained that learners may be familiar with various reading and monitoring strategies and they could also be aware of their strengths and weaknesses to complete a task. For example, for a reading task, first, learners might check their prior knowledge and motivation about the topic of the text. Then, they determine what strategies to use considering the purpose of reading; the extent of their knowledge and motivation or they may make changes in their strategy use. Besides, learners may know they do not need to give detailed information in a multiple-choice test, instead, they choose the best choice. Therefore, they may plan how to study before a multiple-choice test (Pintrich, 2002).

In order to embody the role of metacognitive awareness in teaching, Anderson (2002) provided teaching implications that components of metacognition “*preparing and planning for learning*, *selecting and using learning strategies*, *monitoring strategy use*, *orchestrating various strategies*, and *evaluating strategy use and learning*” (p. 3) should be modeled by teachers in classes. These components include setting learning goals related to a task, choosing appropriate reading strategies, making use of various strategies in process and organizing strategies used as a result of monitoring and evaluating steps. Additionally, a math teacher’s solving a problem by using strategies and explaining students why to use those specific strategies could be an example of metacognitive awareness in teaching (Pintrich, 2002). Besides these strategies, Duffy, Miller, Parsons and Meloth (2009) stated that teachers’ metacognitive awareness also includes

"*promoting content learning, identifying appropriate strategies, making moment-to-moment decisions to insure students' learning* and *adjusting for individual differences"* (p. 3), decision making and scaffolding. Duffy et al (2009) also indicated that while these components are involved in teachers' metacognitive awareness, it may be difficult to observe them due to conditional factors. For instance, even though teachers might have a high level of metacognitive awareness, they may not show it if they have to follow course syllabus strictly or they may not find opportunities to go beyond the principles of the school administration. As for Turkish EFL teachers, this study provides evidence for their metacognitive awareness levels and possible factors that might affect them.

Considering the connection between metacognition and language teaching, Haukås (2018) proposed that language awareness of teachers is highly related to their metacognitive awareness. According to the scholar, the definition of metacognition within the scope of language learning and teaching involves thinking about language as a whole, language learning and teaching process by applying a number of reflections on knowledge, feelings and experiences. Thus, the relation of the concepts is in a curricular manner as demonstrated in Figure 6. Considering the proposed connection between metacognition and language awareness, this study focuses on metacognition as a possible way to also shed light on one's language awareness.

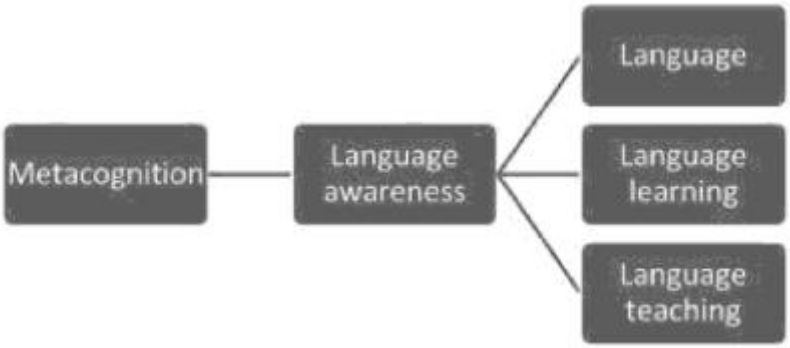

Figure 6. Metacognition in language teaching and learning (Haukås, 2018, p. 14).

Studies Related to Metacognitive Awareness

As metacognition benefits individuals for learning and applying acquired knowledge to different situations, it has been among prominent research fields for researchers. There have been many attempts to investigate metacognitive awareness of learners, in other words, *self-regulated learning* (eg., Anderson, 2002; 2012; Zimmerman, 1990; Zimmerman & Schunk, 2001). From a broad perspective, studies have suggested that developed metacognitive skills are highly related to learners' growth intellectually, and metacognitively aware learners display better performance than unaware learners (e.g., Garner & Alexander, 1989; Veenman, Wilhelm & Beishuizen, 2004). To this end, the studies of Anderson (2002;2012) put forward that there is a significant relationship between learners' strategy use and their metacognitive awareness.

Addressing self-regulated learning, Ridley, Schutz, Glanz and Weinstein (1992) explored interaction between metacognitive awareness and goal setting; and whether they have an effect on students' performance. The findings of this study that was carried out with 89 participants suggested that high or low level of metacognitive awareness was related to student performance: While high-level of awareness led to higher student achievement, low level of awareness led to lower achievement. Furthermore, it emerged that there was a positive interaction between self-regulated learning processes; goal-setting and metacognitive awareness.

Young and Fry (2008) also put forward the role of metacognitive awareness in education. The purpose of the study that was conducted with 178 undergraduate and graduate students (45 graduate and 133 undergraduate students) of a teacher education program in Texas was to examine effectiveness of *Metacognitive Awareness Inventory (MAI)* (Schraw & Dennison, 1994) in relation to academic achievement. Significant correlations were found out between levels of metacognitive awareness and academic achievement through *Grade Point Average* (GPA) scores of the participants. The findings suggested that there was a strong relationship between metacognitive awareness and academic performance, and MAI (Schraw & Dennison, 1994) was a reliable scale addressing metacognitive awareness.

With respect to metacognitive awareness in learning, Narang and Saini (2013) enquired the relationship between learners' metacognition and their academic achievement. The target background factors in the study were socio-economic status and living area that was countryside in India. Participants of the study were 240 students who were between the ages of 13 and 16 from families with middle and low level of income. Their exam results constituted the level of their academic achievement and their metacognition awareness was examined by administering a scale adapted from *MAI* (Schraw & Dennison, 1994) and *Metacognition Inventory* (Govil, 2003 in Narang & Saini, 2013). The findings suggested that the students who had a high level of metacognitive awareness also performed better than the others in the exam, indicating a significant relationship between metacognition and academic performance.

In addition to research on the relationship between general aspects of metacognitive awareness, there are also studies focusing on the role of metacognitive awareness in specific teaching-learning fields (eg., Cross, 2010; Cross & Vandergrift, 2018; Lucangeli, Coi, & Bosco, 1997; Negretti, 2012; Sheorey & Mokhtari, 2001; Tok, Özgan & Döş, 2010; Vandergrift, 2005). Regarding language teaching and learning, researchers have focused on different language skills (eg., Jun Zhang, 2001; Negretti, 2012; Vandergift, 2005). For instance, Sheorey and Mokhtari (2001) compared strategy use of native and nonnative speakers of English in reading with 302 college students. The participants completed surveys on the reading strategies that could be used during academic reading. The findings suggested that all participants regardless of their being native or nonnative were metacognitively aware of strategy use, and they ranked strategies according to their importance in the same way; *cognitive strategies*, *metacognitive strategies*, *support strategies.* As for metacognitive awareness in the listening skill, participants of many studies were found to be metacognitively aware in the second language listening (eg., Cross, 2010; Cross, & Vandergrift, 2018; Goh, 1997; Vandergift, 2005). Cross (2010) investigated it from a socio-cultural perspective in Japanese context. The participants performed tasks including reporting strategies that could be used while listening verbally through dialogs out of peer interaction. The analysis of dialogs revealed that the participants were metacognitively aware of strategy use in listening. Likewise, learners' metacognitive awareness in writing has been

examined and it has emerged that language learners use a number of strategies that they improve in process of second language writing (eg., Negretti, 2012; Zhang & Qin, 2018). In conclusion, metacognitive awareness could be detected in various aspects of language learning.

Learner motivation is another concept that has been addressed as connected to metacognitive awareness. For example, Sungur and Senler (2009) examined Turkish high school students' metacognition with its components; *metacognitive knowledge* and *regulation of metacognition,* and the relationship between metacognition and achievement goals (*mastery approach goals*, *mastery avoidance goals*, *performance approach goals*, *performance avoidance goals*). The study was carried out with 141 high school students through scales of metacognitive awareness, achievement goal and competence expectancy. The findings were that the participants were aware of their strengths and knowledge (declarative knowledge) and why to use strategies (conditional knowledge). However, their knowledge of how to use strategies (procedural knowledge) was lower than the other two components of metacognition. The researchers discussed that this may have been because students were aware that they did not need to know and use a great number of strategies for a specific task, thus, they stuck to a few strategies to use. Consequently, Sungur and Senler (2009) suggested that strategy use be part of classes in order to foster learner autonomy and self-regulated learning.

In a Turkish context, Simsek and Balaban (2010) supported that there is a significantly positive relationship between strategy use and academic performance. The study was carried out at tertiary level with participation of 278 undergraduate students from various departments. Academic performance was addressed by involving *Grade Point Average (GPA)* scores of the students. Accordingly, two groups were formed; high-level achievement and low level achievement groups, and the participants were administered a scale including 60 items. The findings revealed that the participants who had higher GPA scores also used more strategies than the participants of the low level group. Furthermore, there was a difference between female and male students in the use of strategies in favor of female students and strategies used: metacognitive strategies were used more than other strategies. Thus, the study suggested that there is a highly significant relationship between

strategy use and academic achievement while there is a difference in the variety of strategies used.

Studies Related to Teachers' Metacognitive Awareness

While there is much research on learners' metacognition or metacognitive awareness in the literature, it is limited and neglected with regard to teaching and teacher education research as also asserted by Wilson and Bai (2010). Therefore, the researchers aimed to investigate whether this notion was perceived by teachers, in other words, whether they were aware of cognition. The data were collected from 105 graduate students through a mixed-method research. Results suggested that participants who were aware of their cognition also reflected it into improving students' metacognition and they reported that it was a tough process.

Apart from research on beliefs or awareness about metacognition, there have also been studies searching components of metacognitive awareness (eg., Baylor, 2002; Lee, Teo, & Chai, 2010). Planning, one of the components of metacognitive awareness was the focus of Baylor's (2002) study. In this sense, pre-service teachers' instructional planning was explored through three agents (instructivist, constructivist and agent character). Participants of this experimental study were 135 pre-service teachers, and the findings revealed that constructive agent affected the participants' instructional planning, therefore, metacognitive awareness.

Metallidou (2009) also focused on metacognitive awareness with regard to problem solving strategies among pre-service and in-service teachers. The study was carried out with 338 pre-service and in-service teachers in Greece. The purpose of the study was to examine metacognitive awareness of primary school teachers about problem solving strategies with regard to frequency, efficacy and facility ratings. A five Likert-scale questionnaire was used as the instrument. Data analyses revealed that teachers were aware of the need to use different strategies for different problems. Analogy emerged to be the most frequently used strategy. Practical problems were reported to be the major problems that need frequent strategy use. Moreover, the findings revealed that there was a significant difference in the frequency of problem solving strategy use between pre-service and in-service

teachers. Participants suggested age and experience as factors determining their awareness about the use of strategies.

Specific to language teaching, Nahrkhalaji (2014) examined English as a foreign language (EFL) teachers' metacognitive awareness. The participants were 50 EFL teachers in Iran. The purpose of the study was to examine these teachers' metacognitive awareness in their teaching practices. *Metacognitive Awareness Inventory (MAI)* (Schraw & Dennison, 1994) was used as one of the data collection instruments. Students completed a questionnaire to evaluate their teachers' performance, and the results were compared. Data analyses revealed that metacognitive awareness was highly effective in teachers' performance. Educational background and teaching experience were found to be related to teachers' metacognitive awareness.

In Turkey, there have been attempts that focus on discrete aspects of metacognition. For instance, Şendurur, Şendurur, Mutlu and Başer (2011) examined pre-service teachers' metacognitive awareness considering variables of gender, GPA scores and type of high school from which these teachers had graduated. The study that addressed components of metacognitive awareness (*metacognitive knowledge* and *metacognitive regulation*) separately was conducted with 49 pre-service teachers by administering MAI (Schraw & Dennison, 1994). Quantitative data suggested that the participants were metacognitively aware in terms of their metacognitive knowledge since their score on the component of regulation was lower. Furthermore, gender, GPA scores and high school type were found to be related variables to metacognition because it emerged that female teachers had higher GPA scores and metacognitive awareness than male teachers, and Anatolian high school graduates reported to use more metacognitive strategies than the graduates from other types of high school. Overall, the study suggested that metacognitive awareness of pre-service teachers was highly related to their academic achievement.

Koç and Kuvaç (2016) also looked into metacognitive awareness of pre-service science teachers taking independent variables of gender and years of training into account. The study was conducted with 188 pre-service teachers studying at various grades at a state university in Turkey. Data were collected by

administering Turkish adapted version of MAI (Schraw & Dennision, 1994) by Akın et al (2007). Data analysis revealed that the levels of metacognitive awareness of the participants were high, and there was no significant difference in the mean values of both components of metacognition; *metacognitive knowledge* and *regulation of cognition*. As to sub-scales of metacognition, it emerged that awareness levels for *declarative* and *procedural knowledge* were higher than *conditional knowledge* for the component of *metacognitive knowledge*. On the other hand, data revealed the highest scores for awareness were for *debugging strategies* while the lowest levels were for the *evaluation* sub-scale of the component of *regulation of cognition.* For the function of demographic factors; it emerged that while there was no effect of gender in the group differences, years of training had a significant impact on metacognitive awareness of the participants as there was a difference in the mean values of freshman and senior student-teachers.

Similar to Koç and Kuvaç's (2016) study, Baş (2016) explored metacognitive awareness of 287 pre-service secondary math teachers' metacognitive awareness and their metacognitive behaviors during problem solving in consideration of gender and years of training by administering MAI (Schraw & Dennison, 1994) and involving problem-solving processes. Data analyses of that study suggested that the participants' metacognitive awareness was at medium or high-level and their awareness was at a high level for evaluation during problem solving which was not in line with Koç and Kuvaç's (2016), but gender and years of training emerged to have no effect on their awareness as in that study.

Yildiz and Akdag (2017) searched for the effect of strategy use on metacognition and self-efficacy by focusing on pre-service primary education teachers' self-efficacy and metacognition in the field of science and technology. The study was conducted at one of the state universities in Turkey with participation of 87 third-year pre-service teachers. The results of this experimental study that was carried out by collecting data as pre-test and post-test treatment model indicated that strategy use was a way to increase metacognitive awareness and self-efficacy even though the effect of it on self-efficacy was not as high as on metacognitive awareness.

Duman (2018) probed the connection between entrepreneurship characteristics and metacognitive awareness of pre-service teachers. Participants of the study were 441 pre-service teachers who were studying at the teacher education program of a state university in Turkey and were determined as a result of random sampling. Two valid and reliable scales addressing the variables were administered to collect data. The results of the study indicated that the level of metacognitive awareness was related to entrepreneurship characteristics.

Bulut (2018) searched for metacognitive awareness levels of classroom and pre-school teachers considering the variables of gender, experience and teaching field in the southeastern district of Turkey. The study was conducted with 369 in-service teachers of the two fields. Data of this quantitative study were collected by Turkish version of *MAI* (Schraw & Dennison, 1994) translated and adapted by Akın, et.al. (2007). Accordingly, the study revealed that both groups of participants had a high level of metacognitive awareness involving components of metacognitive knowledge and regulation even though there was still a difference in favor of pre-school teachers. As to the variable of gender, it was put forward that there was a statistically significant difference in the levels of metacognitive awareness in favor of female teachers. Furthermore, the effect of experience was found to be in a nonlinear manner since the teachers having the least experience (1-5 years) in the study had higher levels of metacognitive awareness than the other groups.

One of the recent studies on pre-service teachers' metacognitive awareness in relation to demographic factors was carried out by Ekici, Ulutaş and Atasoy (2019), who investigated metacognition of 367 prospective teachers in various departments, and gender, academic achievement, years of training and department were the demographic factors considered as connected to their metacognitive awareness. Data were collected through adapted version of MAI (Schraw & Dennison, 1994) by Akın et al (2007). Statistical analyses suggested that the participants had a medium level of metacognitive awareness, and also academic achievement and years of training were found to be considerably associated with pre-service teachers' awareness, but not gender or department.

As for studies on metacognitive awareness of pre-service English language teachers in Turkish context, Öz (2005; 2014; 2015; 2016) carried out a number of

studies in Turkish contexts addressing the connection between metacognitive awareness of pre-service language teachers and various concepts such as academic motivation, demographic factors and personality traits. In one of his studies (Öz, 2015) carried out with 87 pre-service language teachers on the connection between the components of metacognition and demographic aspects, he revealed that there was no significant relationship among the variables of the study. Furthermore, on the connection between metacognitive awareness and academic motivation, Öz (2016) found out a significant relationship between these two concepts suggesting that training on how to regulate cognition might be motivating for pre-service language teachers to improve their metacognitive awareness.

Sarıçoban (2015) explored metacognitive awareness of pre-service EFL teachers in Turkish context in terms of various contextual factors. The study was conducted at a state university in Turkey with participation of 96 first year students at ELT department by administering MAI (Schraw & Dennison, 1994) as the data collection instrument. Variables of the study were attitudes towards the components of metacognition (metacognitive knowledge and metacognitive regulation), gender and age so as to explore latent factors for metacognitive awareness. With regard to components of metacognition, the results suggested that interest in the topic was a significant reason for learning (declarative knowledge), participants tended to use previously well-worked strategies (procedural knowledge) and they could motivate themselves for learning also by applying a number of different learning strategies (conditional knowledge). As for *metacognitive regulation*, the results suggested that slowing down was the most commonly used strategy for information management. Considering alternatives before solving a problem (comprehension monitoring), asking for help when not understanding (debugging strategies) and self-evaluating the achievement after a task (evaluation) were other preferred components of regulation of metacognition. As for gender and age variables, the findings suggested that gender was only effective in the difference in declarative knowledge.

Çakıcı (2018) explored whether there was a connection between critical thinking skills and level of metacognitive awareness of pre-service EFL teachers. The participants of the study were 218 pre-service EFL teachers studying in the first,

second, third and fourth year in teacher education. Gender and years of education were the other variables of the study as well as the relationship between metacognitive awareness and critical thinking skills. The study was conducted in a survey design by employing questionnaires on the variables. The findings indicated that there was a strong relationship between levels of metacognitive awareness and use of critical thinking skills. As to gender and years of training, the study revealed that gender had no effect on awareness levels or critical thinking whereas years of pre-service education played a significant role. In this sense, senior pre-service EFL teachers were found to have higher levels of metacognitive awareness suggesting that they were better at regulating their metacognition.

Association of teacher self-efficacy and metacognitive awareness has also been focus of a number of studies in the literature. For instance, Alkan and Erdem (2014) investigated the relationship between self-efficacy and metacognitive awareness of chemistry teachers. The sample of the study was 246 pre-service teachers at Hacettepe University in Turkey. *Teachers' Sense of Efficacy Scale* (Tschannen-Moran & Hoy, 2001) and *Metacognitive Awareness Inventory* (Schraw & Dennison, 1994) were used as data collection instruments. The results indicated that there was a significant relationship between these two elements. Based on the findings that teacher self-efficacy and metacognitive awareness were effective in teacher education, it might be assumed that they may also influence language teaching. However, there is limited evidence on the connection of teacher self-efficacy and metacognitive awareness in ELT compared to other branches of teaching (eg., Alkan & Erdem, 2014 on chemistry).

On the association of self-efficacy beliefs with metacognitive awareness in ELT, Alcı and Yüksel (2012) carried out a quantitative study in which they researched any relationship among self-efficacy beliefs, metacognitive awareness and academic achievement followed by investigating causal effect of self-efficacy and metacognitive awareness on GPA scores of 143 pre-service EFL teachers. The data of the study that was collected through scales revealed that while there was a significant relationship among the three variables, only self-efficacy beliefs predicted academic achievement of the participants.

Ghonsooly, Khajavy and Mahjoobi (2014) conducted a study in an Iranian context with 107 EFL teacher trainers in relation to teacher self-efficacy and metacognition. The purpose of the study was to examine whether teacher self-efficacy and metacognition were effective on teacher trainees' academic achievement. Data collection instruments were *TSES* (Tschannen-Moran & Hoy, 2001) and *Metacognitive Awareness Inventory for Teachers (MAIT)* (Balçıkanlı, 2011). A path analysis was conducted, and the findings of this quantitative study suggested that both factors influenced academic achievement of the participants, but the effect of metacognition was more than the effect of self-efficacy beliefs.

Considering evidence in the literature, it could be concluded that metacognitive awareness has an impact on teaching as well as learning (e.g., Akın, et.al., 2007, Alkan & Erdem, 2014; Koç & Kuvaç, 2016; Nahrkhalaji, 2014; Young & Fry, 2008). Although it tends to be a crucial issue for teachers, as Young and Fry (2008) asserted, its role in pre-service teacher education has not been minded as much as learners', still being a neglected issue so far for a couple of reasons. According to Duffy (2005, cited in Young & Fry, 2008), the lack of research on metacognitive awareness in teacher education is caused by environmental issues, lack of training for pre-service teachers and the fact that they are already considered as metacognitively developed. Therefore, it could be beneficial to explore metacognitive awareness levels of pre-service teachers (EFL teachers within the scope of the current study) to possibly improve effectiveness of teacher education programs. Additionally, it still remains as an unknown issue in in-service teacher research, which makes it essential to explore.

The lack of research on the related variables in the field of English language teaching and teacher education in Turkey has led to the focus of the research. The study has been carried out with pre-service and in-service English language teachers and addressed their self-efficacy and metacognitive awareness which could be considered among crucial aspects for effective language teaching. Data have been collected through a number of scales and interviews with the participants. The findings might contribute to the lack of research especially in language teacher education and exemplify current state of language teaching and teacher education in Turkey.

Conclusion

This chapter has presented a review of literature on the variables of the study (teacher self-efficacy and metacognitive awareness) and provided a theoretical background for the purpose and research questions. The following chapter sets forth the methodology applied to collect and analyze data.

Chapter 3
Methodology

Introduction

This chapter presents methodology used in the current study. Within the scope of the chapter, research design and procedures, participants and setting, data collection instruments, data collection and analyses procedures are covered.

Research Design

A mixed-study method was used in the study in order to collect and analyze data. This mixed-method research design was adopted by referring to Craswell's (2003) *sequential explanatory* model which proposes that qualitative data are used to help interpret the results of quantitative data. In this sense, quantitative data of the present study were collected by administering two reliable and valid scales on teacher self-efficacy beliefs and metacognitive awareness of both pre-service and in-service English language teachers. Quantitative data were supported by semi-structured interviews so as to gain deeper insight into findings. Focus of the study included investigating pre-service and in-service English language teachers' self-efficacy beliefs and metacognitive awareness and any possible connection between these elements. For this purpose, first, a valid and reliable scale developed by the researcher on teacher self-efficacy beliefs was administered to both pre-service and in-service teachers. Sequentially, *Metacognitive Awareness Inventory* (Schraw & Dennison, 1994) was used to address the participants' metacognitive awareness levels.

In addition to quantitative data collected through scales, semi-structured interviews were conducted in accordance so as to gain better understanding of the factors. Considering that there were two successive groups; pre-service and in-service English language teachers and demographic data could affect the results, questions were designed to reveal this probable effect. In that respect, it has been proclaimed in the literature that there is a difference between these two groups in respect to the variables of the current study (eg., Hoy & Spero, 2005). Thus, it could be beneficial to focus deeper on the factors leading to these differences. To this end, after the researcher created interview questions, three field experts analyzed

appropriateness of the questions, and the researcher revised them accordingly. The questions in the interview were designed in a way that addresses the participants' reflection on their self-efficacy beliefs, metacognitive awareness and the factors affecting these elements. As a whole, following data collection, a number of quantitative data analyses and coding for qualitative analysis were carried out. Statistical Package for the Social Sciences (SPSS) 23 was used to perform statistical analyses whereas Nnivo 12 Pro was used to code qualitative data.

Procedures

Procedures of the current study included determining research purpose and questions, research design, data collection instruments, participants and setting, and how to analyze data. In this sense, first, an elaborate search of literature was carried out before research design and data collection instruments which conform to the current study were determined. Considering lack of specific instruments that have been developed to address teacher self-efficacy beliefs, a scale was developed including sub-scales of lesson planning, teaching, assessment and professional development within the scope of the current study. In addition to developing a scale, another scale that has been commonly used to address metacognitive awareness in literature; *Metacognitive Awareness Inventory* (Schraw & Dennison, 1994) was determined as data collection instrument, and required permission to use the questionnaire was obtained from the developers of it. Having deciding on the instruments, the researcher analyzed appropriateness of each item on the questionnaires to the research purpose and the setting where the study was to be carried out and whether pilot-studies were needed.

As a second step, appropriate participants and settings were determined for the study regarding eligibility and convenience issues. To this end, one of the leading state universities in Turkey was selected as setting for pre-service and in-service teachers. Apart from eligibility issues, the reason for selecting this university is that it is among top rank universities in Turkey which admit its students among high achievers in the university entrance exam. Thus, the assumption that the students admitted to this university may also be or may not be metacognitively aware students enables the researcher to investigate one of the variables of the study; metacognitive awareness well. As for in-service teachers, the lecturers

working at the School of Foreign Languages of the same university were determined as the participants of the study. Similarly, appropriate data analyses were determined in line with the research questions of the study. Having deciding on the procedures, the researcher applied to Ethics Commission of Hacettepe University in order to obtain permission to carry out the study.

Setting and Participants

This study was conducted at one of the leading state universities in Turkey; with participation of pre-service and in-service English language teachers. The group of pre-service teachers consisted of senior students studying at English Language Teaching (ELT) department of the university. This university was chosen as the setting since it was considered as appropriate for research purposes of the study. According to principles of Council of Higher Education (CoHE) to admit students, students who are highly successful in the university entrance exam are admitted into various departments at the university. That the studies in the literature highlight a positive relationship between student achievement and self-efficacy (e.g., Schunk, 1990; Pajares, 1996); achievement and metacognitive awareness (e.g., Young & Fry, 2008) explains the rationale behind choosing this specific setting of the study. Thus, within the scope of the current study, metacognitive awareness level of the student teachers who study at ELT department of the university could be assumed to be high considering that metacognitive awareness includes knowledge and how to organize this knowledge. In general, in ELT departments, theoretical and practical bases of language teaching are provided to student teachers through courses in a way that their critical thinking is promoted. Due to Bologna process, which aims standardization of education and to which Turkey was involved in 2001, the content of courses available to ELT students in all universities have similar and standard aspects, which has made it possible for the researcher to conduct the study in this specific setting and generalize the results due to relatively similar background issues in question.

In addition to ELT department, School of Foreign Languages of the university was the other setting of the study. Similar to many universities in Turkey, this university also provides English preparatory program for students who cannot meet English proficiency requirement of the departments at which they are to study as

part of their bachelor degree (BA). English language instructors teach various proficiency levels at the School of Foreign Languages. As the university is one of the high ranking universities in Turkey, it is expected to attach major importance to quality of education in its faculties and departments. Therefore, the teachers at School of Foreign Languages are considered as meeting aspects and qualities of effective language teaching, which enables the researchers to select the university; the teachers and students there as setting and participants of the study to address the research purpose and questions.

As for the participants, 96 senior students of ELT department constitute the group of pre-service English language teachers. Students who study at ELT departments carry on their education as prospective English language teachers or pre-service teachers for four years as part of their undergraduate degree (or BA). They are provided with skills and qualifications related to language teaching through courses such as teaching English to children, methodology and second language acquisition. Their grades are cumulated and they are considered as successful if they manage to maintain minimum *Grade Point Average* (GPA) above 1.5 while maximum scores are above 3.5 out of 4.00. Even though they are provided with the same content, their attitudes towards teaching or their academic performance might differ as a result of background issues and personal factors. In the fourth year, as senior students they also have opportunities to practice their teaching related knowledge through two hours of practicum each week which they perform in different schools around the university where they study. Through practicum, they practice how to teach different skills as well as grammar and vocabulary, and they are observed by mentors. Thus, they could evaluate themselves as teachers of English, and their teacher self-efficacy beliefs are shaped. Yet, the amount of experience during practicum could not be regarded as sufficient for pre-service teachers to respond items that are designed to assess in-service teachers' self-efficacy beliefs. Furthermore, it is suggested in the literature that even if pre-service teachers feel highly efficacious during their training, this level goes down in the first years of profession (eg., Pfitzner-Eden, 2016), which could also emerge in the current study and contribute to the research in this field in Turkey. These are the reasons for selecting this specific setting and the participants. Demographic description of pre-service teachers in the study is illustrated Table 2.

Table 2

Demographic Information about Pre-Service Teachers (N=96)

Gender (M=1.21,SD=.41)		Age (M=1.09, SD= .38)			GPA (M=3.08, SD= .65)		
Female	Male	20-26	27-35	45+	1.5-2.99	3.00-3.50	+3.50
75	21	89	6	1	17	54	25

As could be seen in the table, the group of pre-service teachers varied in their gender, age and academic performance, which contributed to reliability of analyses and interpretation of the results.

The group of in-service teachers in the study was comprised of 53 English language lecturers who work at the School of Foreign Languages of the university at which data on pre-service teachers were collected. These lecturers teach English at varied levels and courses. Moreover, they have different background and years of experience, which is important for the purpose of the study as it has been suggested in the literature that factors such as gender, work load, job stress and job satisfaction are effective in quality in teaching, and because of these factors teachers' attitudes towards teaching and their beliefs change (eg., Caprara, et al. 2006; Klassen & Chiu, 2010). School climate, social-emotional factors (eg., Coolie, et al. 2012) and experience (e.g., Chen & Yeung, 2015) are also proclaimed as effective factors. Thus, investigating the effect of these factors in relation to the variables of the study could be appropriate with the participation of English lecturers who have different years of experience and personal aspects. Detailed description and demographic information about in-service teachers in the study is illustrated in Table 3.

Table 3

Demographic Information about In-Service Teachers (N=53)

Gender (M=1.11, SD=.31)			Years of experience (M=2.81, SD=.78)			
Female	Male		0-5	6-10	11-20	20 +
47	6		2	16	25	10
Educational background						
Completed degree			Ongoing degree			
BA	MA	PhD.	None	MA		PhD.
20	28	5	39	2		12

Overall, participants were recruited on a voluntary basis. The researcher explained that required permission to conduct the study was obtained from Ethics Commission of Hacettepe University, no personal information is to be used in the study and that data will only be used for scientific purposes. Information about the study and ethical concern was provided in a consent form, and teachers who agreed on participation by reading and signing the consent forms were regarded as the participants of the study.

Instruments

Two valid and reliable scales were used in order to collect quantitative data of the study. Moreover, qualitative data were gathered through semi-structured interviews to support quantitative data.

Pre-service language teachers' efficacy scale (PLTES and LTES). Available scales on teacher self-efficacy are either too general or addressing only in-service teachers since they include items on teaching practices. For instance, specific to language teachers, one of the most commonly used scales on language teachers' efficacy beliefs was developed by Chacón (2005), who compiled three scales on teacher self-efficacy, language proficiency and pedagogical strategies. However, the section of teacher self-efficacy was based on common areas of classroom management, student engagement and instructional strategies, and they addressed in-service teachers' experiences. Thus, it could be hard for pre-service teachers to internalize the items as they do not as many opportunities for teaching practice as in-service teachers'. Instead, there is a need to examine pre-service

teachers' self-efficacy beliefs by addressing their future practices in order to collect valid and reliable data. In this sense, Breen (1991) proposed that prospective teachers' beliefs about their capabilities to fulfil real classroom tasks are expected to be addressed by researchers in order to keep track of any change in knowledge of these teachers. Moreover, as Bandura (1997) and Tschannen-Moran and Hoy (2001) proclaimed, there is a need to confine scope of self-efficacy for the purpose of revealing significant findings. As a support for the discussion of confining scope of teacher self-efficacy, Zee, et al. (2016) suggested that researchers focusing on general aspects of teacher self-efficacy "…habitually decontextualize TSE from a wider scope of tasks and domains in the classroom, resulting in one-dimensional all-purpose measures that are widely applicable to a range of outcomes" (p. 40). Considering aspects of teacher self-efficacy, context specifity and outcome expectancies, and what is suggested in the literature, this study aims to design a scale which is specific to language teacher self-efficacy for pre-service EFL teachers and adapt it for in-service teachers.

The construct of the scale was developed based on Bandura's (1997) Teacher Efficacy Scale (*TSS*), *Teachers' Sense of Efficacy Scale (TSES)* (Tschannen-Moran & Hoy, 2001), the EAQUALS framework for language teacher training and development (2013) and the project of European Portfolio for Student Teachers of Languages (EPOSTL), (Newby, Allan, Fenner, Jones, Komorowska & Soghikyan, 2007). The capabilities of language teachers stated in these references and Kurtoğlu-Eken's (2007) criteria for effective language teaching were referred while determining the construct of the scale. To this end, four aspects were involved as planning, teaching, assessment and professional development in the construct. Professional development was especially involved in the construct since knowledge is also a component of metacognitive awareness, and there has been no focus on professional development in existing scales developed to address language teachers' self-efficacy beliefs. However, being a language teacher in 21st century requires continuous professional development (Darling-Hammond, 2006)

Initially, 52 items were selected from the item pool addressing these categories. For instance, one of the items in the construct was *"How well do you believe you will be able to establish a positive rapport as part of effective teaching?"*

referring to ‘teaching’ sub-scale. Participants were asked to respond on a 9 Likert-scale ranging from *None to A great deal.* Two versions were designed by wording the items as appropriate for both pre-service and in-service teachers since one of the concerns of the current study is that pre-service teachers are administered scales that address in-service teachers through items focusing on teaching experience. Yet, since pre-service teachers have little or no teaching experience, they could find it difficult to internalize the items on teaching. Concerning the fact, this study aims to develop a self-efficacy scale that is specific to pre-service English language teachers. Regarding that two groups of the participants are supposed to be tested on equal terms for reliability, the same instruments were needed to be employed to hinder effect of any other background issues. For this purpose, the items of the pre-service version of the scale was adapted for in-service English language teachers. Thus, one of the items in this version was *“How well can you establish a positive rapport as part of effective teaching?”* addressing ‘teaching’ sub-scale.

After having consulted ten expert judges for the appropriateness of the items, 12 of the items were removed from the scale, and the number of the items was determined as 40. Having reduced the number of the items, the researcher decided on developing one construct in order to avoid inequality among items referring to sub-scales. The construct addressed all sub-scales, but they differed in number. One item was removed based on the feedback during data collection, and the number of the items was finalized as 39 (See Appendix B for the construct).

The developed construct was administered to 200 pre-service teachers studying at the department of English Language Teaching at a state university in Turkey.

Study 1 (pilot study) was conducted in the spring term of 2017-2018 academic year after getting ethical permission from Hacettepe University Ethics Commision. The number of the participants could be regarded as acceptable for factor analyses and scale development as it has been stated in the literature that sample size is expected to be 5 or 10 times higher than the number of the items on a scale (e.g. Karakoç & Dönmez, 2014; Kurnaz & Yigit, 2010; Tavşancıl, 2002). Therefore, 200 (participants) is a sufficient number for 39 items on the construct of

the scale. Following statistical analyses, it emerged that there were more points to take into consideration in order to get stronger values. Thus, the pilot study was carried out with the same participants again in the Fall Term of 2018-2019 Academic Year.

After data collection, a number of statistical analyses were conducted as part of scale development. Initially, Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity were conducted in order to analyze appropriateness of the construct for factor analyses. See Table 4 for the output of these tests.

Table 4

Output of KMO and Bartlett's Tests

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.928
Bartlett's Test of Sphericity	Chi-Square	1832.782
	Df	253
	Sig.	.000

As could be seen in the table, the analyses suggest appropriateness of the construct and a strong correlation between the items since KMO (.92) is higher than .5 and Bartlett's has a significant value ($p<.05$). Thus, factor analyses were conducted considering the results of KMO and Bartlett's test. Additionally, *Principle Component Analysis* and *Varimax with Kaiser Normalization* test, which is the most commonly used rotation method in conducting factor analyses (Johnson & Wichern, 1992) were carried out for further analyses. Factors revealed as a result of these analyses are shown in Table 5.

Table 5

Output of Factor Analyses

	Initial Eigenvalues			Rotated Sums of Squared Loadings		
(component)	Total	Variance %	Total %	Total	Variance %	Total %
1	8. 901	38.699	38.699	8.901	38.699	38.699
2	1. 240	5.392	44.091			
3	1. 188	5.164	49.255			
4	.988	4.295	53.550			
5	.948	4.123	57.672			
6	.894	3.887	61.559			
7	.839	3.649	65.208			
8	.803	3.490	68.698			
9	.711	3.093	71.791			
10	.661	2.876	74.667			
11	.630	2.740	77.407			
12	.593	2.578	79.985			
13	.551	2.395	82.380			
14	.543	2.362	84.742			
15	.500	2.176	86.917			
16	.496	2.156	89.074			
17	.438	1.903	90.977			
18	.423	1.840	92.817			
19	.389	1.693	94.510			
20	.370	1.610	96.120			
21	.331	1.440	97.560			
22	.314	1.364	98.924			
23	.247	1.076	100.000			

Three principles were considered in analyzing the results. The items with factor loads lower than .5; the items that have no correlation with others and the items that are distributed in more than one factor were removed and therefore, the results of Varimax with Kaiser Normalization test suggested that it is a one-factor construct including items related to the sub-scales pre-determined (planning, teaching, assessment and professional development). The items on the pre-service teacher version and their factor loads which are higher than .5 are demonstrated in Table 6.

Table 6

Items and Factor Loads (Pre-service Language Teachers)

Item		C 1
Q31	How well do you believe you will be able to respond students about the function of a specific language form?	.730
Q20	How well do you believe you will be able to monitor classroom learning to identify learning needs and achievement?	.727
Q21	How well do you believe you will be able to distinguish differences between language levels in terms of knowledge and skills to be assessed?	.676
Q22	How well do you believe you will be able to establish a positive rapport as part of effective teaching?	.662
Q23	How well do you believe you will be able to use appropriate techniques for assessment to ensure learners are assessed fairly?	.657
Q32	How well do you believe you will be able to integrate alternative assessment tools into your testing practices?	.646
Q27	How well do you believe you will be able to identify learners' errors and use techniques to correct them?	.636
Q28	How well do you believe you will be able to design alternative activities in case your lesson plan does not work?	.633
Q5	How well do you believe you will be able to engage different learners in classes?	.628
Q14	How well do you believe you will be able to use basic techniques in different pace of a lesson to promote learning of the target language?	.623
Q12	How much do you believe you will be able to provide good and correct models of language such as pronunciation for learners?	.623
Q4	How well do you believe you will be able to integrate activities including different language skills into your lesson plan?	.615
Q15	How well do you believe you will be able to critically evaluate your teaching through various reflection tools?	.606
Q8	How well do you believe you will be able to integrate professional development procedures and activities into your teaching?	.606
Q37	How much do you believe you will collaborate with your colleagues in order to improve your teaching practices?	.598
Q30	How well do you believe you will be able to adapt course materials in a way that appeals to your objectives and lesson plan?	.590
Q33	How much do you believe you will consider educational and psychological theories related to language learning in your practices?	.589
Q24	How well do you believe you will be able to deal with cultural issues as part of your teaching practices?	.588
Q36	How well do you believe you will be able to design effective tests conforming to your objectives?	.577
Q1	How well do you believe you will be able to plan your lessons considering the pace and varieties of activities?	.575
Q11	How much do you believe you will engage in self-development activities in various contexts?	.565
Q26	How well do you believe you will able to set up and monitor activities through pair and group-work?	.562
Q38	How much do you believe you will participate in educational conferences, seminars, webinars and MOOCs etc. to improve your teaching?	.557

The gap in the related research is that even though pre-service teachers do not have as many experiences as in-service language teachers do, they are administered self-efficacy scales which could be responded considering teaching experiences, and that may result in misleading pre-service teachers and

consequently the findings of any study. Therefore, the construct developed within the scope of this research for pre-service teachers could enable pre-service teachers to internalize it better and be a valid and reliable way to collect data from them. The only difference of the construct in the in-service language teacher version was the wording of the items since one of the main focuses of the study is to develop a scale specific to pre-service language teachers. See Table 7 for the in-service version of the scale.

Table 7

Items and Factor Loads (In-Service Teachers)

Item		C 1
Q31	How well can you respond students about the function of a specific language form?	.730
Q20	How well can you monitor classroom learning to identify learning needs and achievement?	.727
Q21	How well can you distinguish differences between language levels in terms of knowledge and skills to be assessed?	.676
Q22	How well can you establish a positive rapport as part of effective teaching?	.662
Q23	How well can you use appropriate techniques for assessment to ensure learners are assessed fairly?	.657
Q32	How well can you integrate alternative assessment tools into your testing practices?	.646
Q27	How well can you identify learners' errors and use techniques to correct them?	.636
Q28	How well can you design alternative activities in case your lesson plan does not work?	.633
Q5	How well can you engage different learners in classes?	.628
Q14	How well can you use basic techniques in different pace of a lesson to promote learning of the target language?	.623
Q12	How much can you provide good and correct models of language such as pronunciation for learners?	.623
Q4	How well can you integrate activities including different language skills into your lesson plan?	.615
Q15	How well can you critically evaluate your teaching through various reflection tools?	.606
Q8	How well can you integrate professional development procedures and activities into your teaching?	.606
Q37	How much do you collaborate with your colleagues in order to improve your teaching practices?	.598
Q30	How well can you adapt course materials in a way that appeals to your objectives and lesson plan?	.590
Q33	How much do you consider educational and psychological theories related to language learning in your practices?	.589
Q24	How well can you deal with cultural issues as part of your teaching practices?	.588
Q36	How well can you design effective tests conforming to your objectives?	.577
Q1	How well can you plan your lessons considering the pace and varieties of activities?	.575
Q11	How much do you engage in self-development activities in various contexts?	.565
Q26	How well can you set up and monitor activities through pair and group-work?	.562
Q38	How much do you participate in educational conferences, seminars, webinars and MOOCs etc. to improve your teaching?	.557

Subsequent to factor analyses, reliability of the construct was analyzed. For this purpose, Cronbach's Alpha reliability analyses were conducted. The output of

the analyses suggested that the factor has a significant reliability value (pre-service teachers' version; α= .93 and in-service teachers' version; α= .87).

As part of statistical analyses essential for scale development, test-retest analyses were carried out. For this purpose, the scale with removed items was administered again in the same setting as the previous study (*N*=187 pre-service language teachers). Being a part of confirmatory factor analyses (CFA), Structural Equation Modeling (SEM) was performed to analyze fitness of the one-factor model using Analysis of Moment Structures (AMOS) and the values confirmed the model. See Figure 7 for the output of CFA and Table 8 for the output of model fit analyses which are Chi-Square ($\chi 2$), Relative Chi-square Index (CMIN/df), Root Mean Square Residual (RMR), Goodness-of-fit index (GFI) and Root Mean Square Error of Approximation (RMSEA) on the next page.

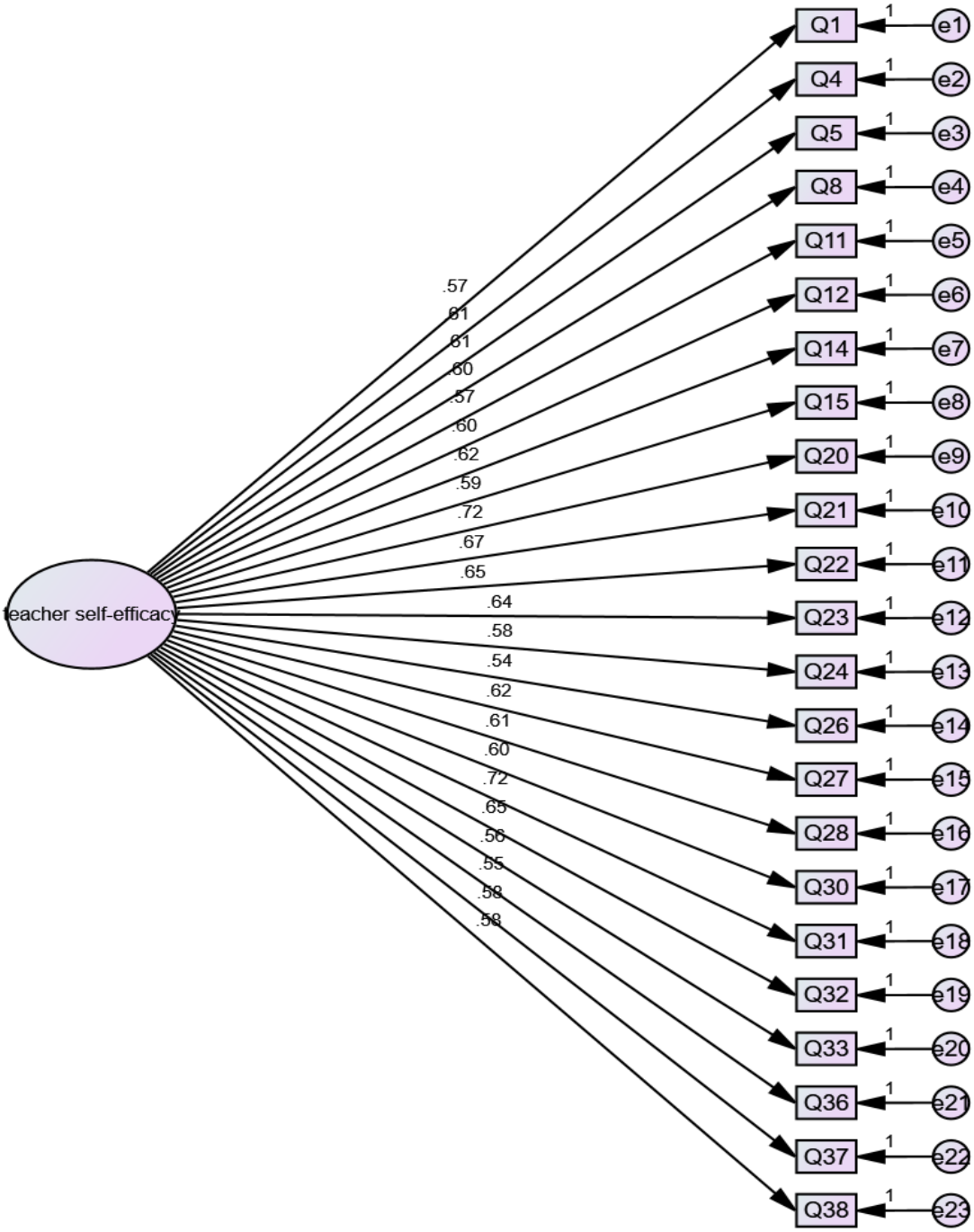

Figure 7. Model fit of the scale.

Table 8

The Output of Model Fit Analyses

χ2	Df	p.	CMIN/df	RMR	GFI	RMESA
400.7	230	.00	1.74	.10	.85	.06

Considering cut-off points values for the model fit analyses suggested by (Ullman, 2001), Kline (2005) and Hooper, Coughlan and Mullen (2008), values of p (<.05), CMIN/df (<2) and RMESA (< .08) were found to be acceptable indicating good fit of the model.

Now that the construct that was developed to measure self-efficacy beliefs of language teachers' self-efficacy beliefs emerged to be a valid and reliable instrument consisting of 23 items as a result of exploratory and confirmatory factor analyses (pre-service teachers' version; α= .93 and in-service teachers' version; α=.87), it was employed in the actual data collection procedures both from pre-service teachers with the version of Pre-service Language Teachers' Efficacy Scale (PLTES) and from in-service teachers with the version of Language Teachers' Efficacy Scale (LTES) (See Appendices C and D for the scales).

Metacognitive awareness inventory (MAI). In order to investigate metacognitive awareness levels of both pre-service and in-service English language teachers, literature was reviewed for probable instruments that could serve well for the research purpose. Consequently, *Metacognitive Awareness Inventory (MAI)* (Schraw & Dennison, 1994) was found to be appropriate for the current study since it is a comprehensive scale involving all components of metacognitive awareness and accepted globally as a valid and reliable instrument. The scale comprises of 52 items related to both components of metacognition; *metacognitive knowledge* (referred as knowledge about cognition in the scale) and *regulation of cognition* (referred as regulation of cognition in the scale). Knowledge about cognition consists of 17 items for *declarative*, *procedural* and *conditional knowledge* and *regulation of cognition* includes 35 items for *planning*, *information management strategies*, *comprehension monitoring, debugging strategies* and *evaluation*. See Table 9 for the numbers of the items for each category:

Table 9

Items and Sub-scale of MAI (Schraw & Dennison, 1994)

Sub-scales of metacognition	Item numbers
Knowledge about cognition	
Declarative knowledge	5, 10, 12, 16, 17, 20, 32, 46
Procedural knowledge	3, 14, 27, 33
Conditional knowledge	15, 18, 26, 29, 35
Regulation of cognition	
Planning	4, 6, 8, 22, 23, 42, 45
Information management strategies	9, 13, 30, 31, 37, 39, 41, 43, 47, 48
Comprehension monitoring	1, 2, 11, 21, 28, 34, 49
Debugging strategies	25, 40, 44, 51, 52
Evaluation	7, 19, 24, 36, 38, 50

For each item, participants choose one of options appealing to them on a range of 7 Likert-scale (1=*Strongly Disagree*, 7=*Strongly Agree*). For example; *"I understand my intellectual strengths and weaknesses"* is an item addressing *declarative knowledge* of *knowledge about cognition* while *"I ask myself periodically if I am meeting my goals." is an item addressing comprehension monitoring* of *regulation of cognition* (See Appendix E for the whole of the scale).

Validity and reliability of this scale in Turkish context was analyzed in a number of studies (eg., Akın, et. al., 2007; Öz, 2016). Akın, et. al., (2007) investigated reliability of the Turkish version of this scale and found out that the scale was a valid and reliable instrument that could be used in educational research in Turkey. Specifically, with regard to English language teaching, Öz (2016) used the scale to examine the relationship between metacognitive awareness and academic motivation of pre-service English language teachers, and the results of AMOS confirmed the validity of the scale in Turkish context. Therefore, *MAI* (Schraw & Dennison, 1994) was used in the study after getting the permission of the researchers developing the scale.

Reliability of the scale was also analyzed in a pilot study with the participation of 32 in-service English language teachers who have similar background with the participants of the main study. The value of Cronbach's alpha indicated strong reliability of the whole scale (α=.95). See Table 10 for the reliability of all sub-scales.

Table 10

Reliability Analyses of Sub-Scales of MAI (Schraw & Dennison, 1994)

Sub-scales of metacognition	Cronbach's alpha (α)
Knowledge about cognition	
Declarative knowledge	.84
Procedural knowledge	.66
Conditional knowledge	.68
Regulation of cognition	
Planning	.78
Information management strategies	.69
Comprehension monitoring	.83
Debugging strategies	.74
Evaluation	.76

Since total score of reliability was found to be high and considering validity of the scale, it was determined as one of the instruments to collect quantitative data of the study.

Semi-structured interviews. In addition to collecting quantitative data, semi-structured interviews were conducted in order to support quantitative data out of the scales and get a deeper insight of the factors affecting the results. Participants were pooled among pre-service and in-service teachers with high and low level of the variables of the study; teacher self-efficacy and metacognitive awareness. The fact that focus of one of the research questions was to investigate group differences as function of independent variables such as gender was considered in forming the interview groups. Accordingly, gender and academic performance were taken into account for pre-service language teachers while gender and years of experience were independent variables of in-service language teachers group. Based on these principles, participants were recruited in a way that each group was nearly equal in number. See Table 11 and 12 for description of participants for the interviews.

Table 11

Participants of the Semi-Structured Interviews (Pre-Service)

N=12	Group I	Group II	Group III	Group IV
Pre-service teachers	3 female GPA above 3.5	3 female GPA 1.5-2.99	3 male GPA above 3.5	3 male GPA 1.5-2.99

Table 12

Participants of the Semi-Structured Interviews (In-Service)

In-service teachers	N=14		
Group I	2 female	11-20 years of experience	MA or PhD.
Group II	3 female	11-20 years of experience	BA
Group III	2 female	6-10 years of experience	MA or PhD.
Group IV	3 female	6-10 years of experience	BA
Group V	2 male	11-20 years of experience	MA or PhD.
Group VI	2 male	6-10 years of experience	MA or PhD.

Ethical issues were handled before the interviews and voluntary participation was considered in this phase of the study.

Interview questions were designed by the researcher considering research purposes and the results of quantitative data. In order not to be directive, questions were structured as mainly yes/no questions that require more explanation. The questions were adapted into two versions addressing both pre-service and in-service teachers and checked by three other researchers in the field for their appropriateness. Being revised, they were finalized for the semi-structured interviews. The questions for in-service teachers were as follows:

1. What do you think about your capabilities in planning, teaching, assessment and professional development? Do you think you are effective in them? If yes, what are your strengths? If no, what areas do you need to develop?
2. Do you think there are factors affecting your efficacy beliefs such as work load, stress and learner motivation?
3. Do you think you can make use of cognitive skills such as planning, checking comprehension while learning something?
4. Do you think you can make use of these skills in your teaching?

The interviews were conducted and transcribed for further analyses to check whether they were in line with quantitative analyses or not. For this purpose, transcribed interviews were coded for the content analyses by using Nvivo 12 Pro.

Data Collection Procedures

Data of the study were collected in different phases following approval of Ethics Commission of Hacettepe University to conduct the study. Accordingly, first, quantitative data were collected and followed by qualitative data. To collect quantitative data, literature was reviewed for appropriate instruments to the research purposes. To this end, MAI (Schraw & Dennison, 1994) was found to be a fit-for-purpose scale for the current study. Yet, considering that there is lack of research and scales on specific components of teacher self-efficacy, it was found to be necessary to develop a scale which is specific to qualities of effective language teaching. For this purpose, principles of scale development were applied within the scope of this study, and data were collected through pilot studies that were conducted for validity of the scale. Through a test-retest model of factor analyses, statistical analyses were performed on the data. Once validity and reliability analyses were carried out, they were administered to both pre-service and in-service groups of the participants for the main study.

Qualitative data were gathered through semi-structured interviews to support the quantitative data. Therefore, questions that address various aspects of self-efficacy beliefs and metacognitive awareness were formed and asked to the participants in the interviews that were recorded. All participants of the interviews were informed about recording procedures before the interviews. See Figure 8 for data collection procedures.

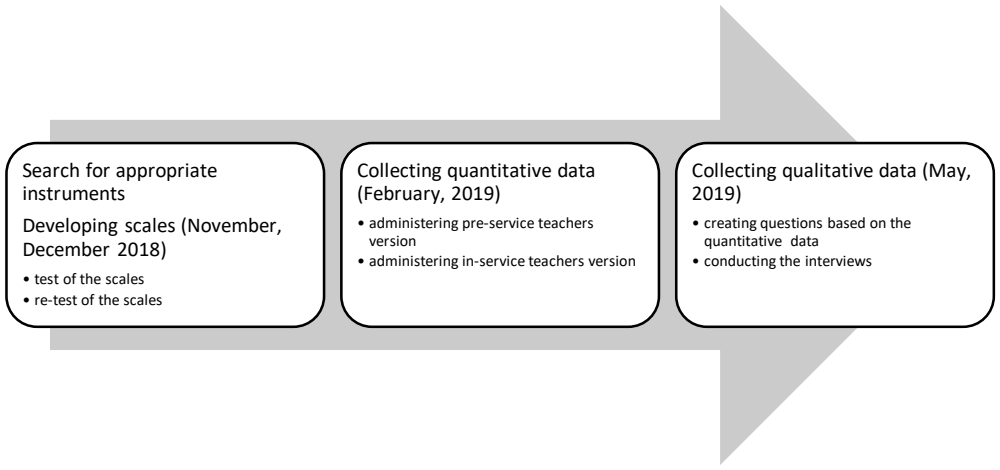

Figure 8. Data collection procedures.

Data Analysis Procedures

Quantitative data were examined by conducting a number of statistical analyses by employing SPSS 23. First, descriptive and exploratory factor analyses, SEM analyses by using AMOS and reliability analyses were conducted in the scale development stage. Subsequently, developed scales were administered to collect quantitative data of the main study. Descriptive statistics, normality test, Pearson Correlation Test, Independent Samples T-Test and One-way ANOVA were conducted to analyze relationship within and between groups considering significance of values and normal variances of the variables in the normality test.

Qualitative data which particularly revealed factors influencing the participants' teacher self-efficacy beliefs and metacognition were analyzed by coding and content analyses of the transcribed interviews by using Nvivo 12 Pro. Overall, these analyses revealed significant findings related to variables and factors in the study, which could be found in the next chapter.

Conclusion

In this chapter, methodology of the current study was presented. Accordingly, research design and procedures, setting and participants, data collection instruments, procedures and data analyses were addressed. The next chapter puts forward the findings emerging based on these components.

Chapter 4
Findings

Introduction

The aim of the current study was to investigate perceived self-efficacy beliefs of pre-service and in-service English language teachers. Metacognitive awareness was the other variable explored within the scope of the research. Furthermore, the study searched for any possible similarities or differences between the two groups considering their self-efficacy beliefs and metacognitive awareness. Finally, any function of independent variables such as gender, academic performance and experience were looked into to explain differences (if there are any) between and among the groups. Thus, the following research questions were addressed:

1. What are pre-service and in-service EFL teachers' perceived levels of self-efficacy and metacognitive awareness?

2. Is there a significant relationship between pre-service and in-service EFL teachers' perceived levels of self-efficacy and metacognitive awareness?
3. Is there any difference in self-efficacy and metacognitive awareness (levels) between pre-service and in-service EFL teachers?
4. Is there any difference in the mean scores of pre-service and in-service EFL teachers' perceived levels of self-efficacy and metacognitive awareness as a function of demographic information?

This chapter presents the results of the data analyses on the research questions above.

The data of the study were collected from 96 pre-service EFL teachers studying at the Faculty of Education, ELT Department of one of the leading state universities in Turkey as senior students and 53 in-service English teachers working at the School of Foreign Languages of the same university as English lecturers by administering two valid and reliable scales and semi-structured interviews. Both quantitative and qualitative data analyses were conducted through descriptive statistics, Pearson and Spearman Correlation Tests, Independent Samples T-test

(Student-t) and Mann Whitney U Test, One-way ANOVA and Kruskal Wallis H Test and content analysis of the interviews.

The data collected from both groups of the participants were analyzed by applying appropriate quantitative and qualitative data analyses methods and procedures. Accordingly, SPSS 23 was used for the analyses of quantitative data while qualitative data were coded and analyzed with Nvivo 12 Pro.

In order to find out general aspects of self-efficacy beliefs and metacognitive awareness, two valid and reliable scales were administered to groups of pre-service and in-service English language teachers. Teacher self-efficacy scale was created and validated by the researcher whereas *Metacognitive Awareness Inventory* (Schraw & Dennison, 1994) was used to address metacognitive awareness of the participants. Initially, descriptive statistics were conducted separately for both groups to analyze their efficacy and awareness levels for the components involved in the scales. Secondly, non-parametric Mann Whitney U Test was conducted to analyze whether there was any difference between the two groups (pre-service and in-service teachers) considering their efficacy beliefs and metacognition following descriptive statistics and normality tests. Thirdly, total values for self-efficacy beliefs and metacognitive awareness were compared to examine whether there was any relationship between the two variables through Pearson and Spearman Correlation Coefficient. Finally, parametric tests of Student-t test and one-way ANOVA and non-parametric tests of Mann Whitney U and Kruskal Wallis H were conducted to analyze if there was any difference in the levels of self-efficacy and metacognitive awareness as function of gender, academic achievement, years of experience and educational background according to normality of the data for the related independent variable. The results of quantitative data analyses were interpreted and tables were created.

Qualitative data were collected from semi-structured interviews that were transcribed, coded and categorized according to frequencies of themes. The reliability of the analyses was ensured by coding of another researcher. Then the codes of both researchers were compared and finalized. In general, themes were classified into high or low level of self-efficacy, metacognitive awareness in learning

and teaching and effective factors in the levels of perceived self-efficacy and metacognition.

Findings

The results of these analyses are presented in a sequence ranging from quantitative data to qualitative data, which are as follows:

Findings on Pre-Service and In-service EFL Teachers' Perceived Levels of Self-Efficacy and Metacognitive Awareness

The first research question focuses on the perceived levels of self-efficacy and metacognitive awareness of pre-service and in-service EFL teachers'. In order to address them, teacher self-efficacy scale that was developed by the researcher as two versions (pre-service teachers; PLTES and in-service teachers; LTES) and *Metacognitive Awareness Inventory* (Schraw & Dennison, 1994) were administered to the participants. A number of statistical analyses were conducted through Statistical Packages of Social Sciences (SPSS) version 23. To start with, descriptive statistics were carried out to determine perceived teacher self-efficacy and metacognitive awareness levels.

Data related to pre-service teachers' perceived self-efficacy beliefs were collected by administering PLTES that includes four sub-scales; planning, teaching, assessment and professional development. Overall, the data suggested that pre-service teachers in the study had a high level of self-efficacy beliefs, and there was no significant difference in the mean values of the components of self-efficacy beliefs while participants' perceived self-efficacy beliefs about planning were relatively higher than other components of teacher self-efficacy. Table 13 illustrates descriptive statistics of self-efficacy beliefs of pre-service teachers in the study.

Table 13

Descriptive Statistics of Self-Efficacy Beliefs of Pre-Service Teachers

Components of teacher self-efficacy	M	SD
Planning	7.08	1.19
Teaching	6.63	1.08
Assessment	6.74	1.10
Professional development	6.78	1.26

As for the items specific to each sub-scale, it emerged that there were no significant differences in the mean values of the items. See Table 14,15, 16 and 17 for the items involved in each sub-scale of teacher self-efficacy.

Table 14

Pre-Service Teachers' Self-Efficacy Beliefs about Planning

Planning	M	SD
How well do you believe you will be able to design alternative activities in case your lesson plan does not work?	6.98	1.55
How well do you believe you will be able to integrate activities including different language skills into your lesson plan?	7.08	1.54
How well do you believe you will be able to adapt course materials in a way that appeals to your objectives and lesson plan?	7.2	1.39
How well do you believe you will be able to plan your lessons considering the pace and varieties of activities?	7.07	1.34

Table 15

Pre-Service Teachers' Self-Efficacy Beliefs about Teaching

Teaching	M	SD
How well do you believe you will be able to respond students about the function of a specific language form?	6.41	1.43
How well do you believe you will be able to monitor classroom learning to identify learning needs and achievement?	6.56	1.47
How well do you believe you will be able to establish a positive rapport as part of effective teaching?	6.50	1.57
How well do you believe you will be able to engage different learners in classes?	6.45	1.63
How well do you believe you will be able to use basic techniques in different pace of a lesson to promote learning of the target language?	6.61	1.33
How much do you believe you will be able to provide good and correct models of language such as pronunciation for learners?	6.44	1.68
How much do you believe you will consider educational and psychological theories related to language learning in your practices?	6.44	1.76
How well do you believe you will be able to deal with cultural issues as part of your teaching practices?	7.16	1.57
How well do you believe you will be able to set up and monitor activities through pair and group-work?	7.1	1.43

Table 16

Pre-Service Teachers' Self-Efficacy Beliefs about Assessment

Assessment	M	SD
How well do you believe you will be able to distinguish differences between language levels in terms of knowledge and skills to be assessed?	6.47	1.36
How well do you believe you will be able to use appropriate techniques for assessment to ensure learners are assessed fairly?	7.01	1.37
How well do you believe you will be able to integrate alternative assessment tools into your testing practices?	6.67	1.52
How well do you believe you will be able to identify learners' errors and use techniques to correct them?	7.2	1.33
How well do you believe you will be able to design effective tests conforming to your objectives?	6.34	1.44

Table 17

Pre-Service Teachers' Self-Efficacy Beliefs about Professional Development

Professional development	M	SD
How well do you believe you will be able to critically evaluate your teaching through various reflection tools?	6.79	1.69
How well do you believe you will be able to integrate professional development procedures and activities into your teaching?	6.62	1.66
How much do you believe you will collaborate with your colleagues in order to improve your teaching practices?	7.01	1.72
How much do you believe you will engage in self-development activities in various contexts?	7.03	1.54
How much do you believe you will participate in educational conferences, seminars, webinars and MOOCs etc. to improve your teaching?	6.46	1.24

As for the results related to metacognitive awareness of pre-service language teachers, they revealed that levels of metacognitive awareness both for components of knowledge and regulation were similar and as a whole, there was a relatively small difference between metacognitive knowledge and regulation. See Table 18 for descriptive statistics of metacognitive awareness levels.

Table 18

Descriptive Statistics of Metacognitive Awareness (Pre-Service Teachers)

	M	SD
Declarative	5.35	.92
Procedural	5.2	1.08
Conditional	5.35	.99
Planning	5.21	.99
Information management	5.32	1.08
Monitoring	5.13	.86
Debugging	5.72	.98
Evaluation	4.81	1.1
Metacognitive knowledge	5.32	.9
Regulation of cognition	5.23	.91

While the difference among the components of metacognitive awareness (knowledge and regulation) was small, items in each category had distinct values from each other.

Table 19

Descriptive Statistics of Declarative Knowledge

Declarative knowledge	M	SD
I understand my intellectual strengths and weaknesses.	5.88	1.23
I know what kind of information is most important to learn.	5.68	1.35
I am good at organizing information.	4.93	1.49
I know what I am expected to learn.	4.98	1.46
I am good at remembering information.	4.4	1.47
I have control over how well I learn.	4.86	1.33
I am a good judge of how well I understand something.	5.38	1.21
I learn more when I am interested in the topic.	6.71	.93

Table 20

Descriptive Statistics of Procedural Knowledge

Procedural knowledge	M	SD
I try to use strategies that have worked in the past.	5.55	1.28
I have a specific purpose for each strategy I use.	5.13	1.35
I am aware of what strategies I use when I study.	5.25	1.45
I find myself using helpful learning strategies automatically.	4.89	1.38

Table 21

Descriptive Statistics of Conditional Knowledge

Conditional knowledge	M	SD
I learn best when I know something about the topic.	6.10	1.40
I use different learning strategies depending on the situation.	4.85	1.64
I can motivate myself to learn when I need to	5.66	1.26
I use my intellectual strengths to compensate for my weaknesses.	5.38	1.28
I know when each strategy I use will be most effective.	4.75	1.42

Table 22

Descriptive Statistics of Planning

Planning	M	SD
I pace myself while learning in order to have enough time.	5.15	1.37
I think about what I really need to learn before I begin a task.	5.57	1.29
I set specific goals before I begin a task.	5.14	1.40
I ask myself questions about the material before I begin.	4.65	1.65
I think of several ways to solve a problem and choose the best one.	5.31	1.46
I read instructions carefully before I begin a task.	5.77	1.61
I organize my time to best accomplish my goals	4.91	1.57

Table 23

Descriptive Statistics of Information Management Strategies

Information management strategies	M	SD
I slow down when I encounter important information.	5.86	1.49
I consciously focus my attention on important information.	5.33	1.50
I focus on the meaning and significance of new information.	5.56	1.22
I create my own examples to make information more meaningful.	5.35	1.48
I draw pictures or diagrams to help me understand while learning.	4.77	2.05
I try to translate new information into my own words.	5.35	1.85
I use the organizational structure of the text to help me learn.	5.01	1.45
I ask myself if what I'm reading is related to what I already know.	5.46	1.35
I try to break studying down into smaller steps.	5.57	1.67
I focus on overall meaning rather than specifics.	4.91	1.90

Table 24

Descriptive Statistics of Comprehension Monitoring

Comprehension monitoring	M	SD
I ask myself periodically if I am meeting my goals.	5.47	1.36
I consider several alternatives to a problem before I answer.	5.33	1.18
I ask myself if I have considered all options when solving a problem.	5.34	1.18
I periodically review to help me understand important relationships.	4.85	1.36
I find myself analyzing the usefulness of strategies while I study.	4.90	1.63
I find myself pausing regularly to check my comprehension.	4.92	1.40
I ask myself questions about how well I am doing while learning something new.	5.11	1.26

Table 25

Descriptive Statistics of Debugging Strategies

Debugging strategies	M	SD
I ask others for help when I don't understand something.	5.88	1.28
I change strategies when I fail to understand.	5.28	1.44
I re-evaluate my assumptions when I get confused.	5.43	1.47
I stop and go back over new information that is not clear.	5.85	1.23
I stop and reread when I get confused.	6.15	1.22

Table 26

Descriptive Statistics of Evaluation

Evaluation	M	SD
I know how well I did once I finish a test.	4.89	1.26
I ask myself if there was an easier way to do things after I finish a task.	4.62	1.69
I summarize what I've learned after I finish.	4.62	1.70
I ask myself how well I accomplish my goals once I'm finished.	5.09	1.53
I ask myself if I have considered all options after I solve a problem.	4.86	1.54
I ask myself if I learned as much as I could have once I finish a task.	4.81	1.36

Overall, descriptive statistics revealed that pre-service teachers in the study were positive in their beliefs about teaching related capabilities as a future English teacher.

Table 27

Components of Teacher Self-Efficacy (In-Service Teachers)

Components of teacher self-efficacy	M	SD
Planning	7	1.26
Teaching	6.94	1.33
Assessment	6.71	1.30
Professional development	6.11	1.87

Table 28

In-Service Teachers' Self-Efficacy Beliefs about Planning

Planning	M	SD
How well can you design alternative activities in case your lesson plan does not work?	7.09	1.67
How well can you integrate activities including different language skills into your lesson plan?	7.15	1.08
How well can you adapt course materials in a way that appeals to your objectives and lesson plan?	7	1.55
How well can you plan your lessons considering the pace and varieties of activities?	6.79	1.57

Table 29

In-Service Teachers' Self-Efficacy Beliefs about Teaching

Teaching	M	SD
How well can you respond students about the function of a specific language form?	7.43	1.24
How well can you monitor classroom learning to identify learning needs and achievement?	7.22	1.23
How well can you establish a positive rapport as part of effective teaching?	7.49	1.58
How well can you engage different learners in classes?	6.75	1.63
How well can you use basic techniques in different pace of a lesson to promote learning of the target language?	7	1.5
How much can you provide good and correct models of language such as correct pronunciation for learners?	6.96	1.69
How much do you consider educational and psychological theories related to language learning in your practices?	6.37	1.5
How well can you deal with cultural issues as part of your teaching practices?	6.32	2.18
How well can you set up and monitor activities through pair and group-work?	6.98	2.01

Table 30

In-Service Teachers' Self-Efficacy Beliefs about Assessment

Assessment	M	SD
How well can you distinguish differences between language levels in terms of knowledge and skills to be assessed?	6.92	1.63
How well can you use appropriate techniques for assessment to ensure learners are assessed fairly?	6.67	1.71
How well can you integrate alternative assessment tools into your testing practices?	6.54	1.65
How well can you identify learners' errors and use techniques to correct them?	7.41	1.30
How well can you design effective tests conforming to your objectives?	6.01	1.52

Table 31

In-Service Teachers' Self-Efficacy Beliefs about Professional Development

Professional development	M	SD
How well can you critically evaluate your teaching through various reflection tools?	6.52	1.83
How well can you integrate professional development procedures and activities into your teaching?	6.33	2.02
How much do you collaborate with your colleagues in order to improve your teaching practices?	6.47	1.96
How much do you engage in self-development activities in various contexts?	6.15	2.23
How much do you participate in educational conferences, seminars, webinars and MOOCs etc. to improve your teaching?	5.09	2.36

Table 32

Descriptive Statistics of Metacognitive Awareness (In-Service Teachers)

	M	SD
Declarative	5.68	.77
Procedural	5.47	.83
Conditional	5.59	.71
Planning	5.47	.80
Information management	5.75	.68
Comprehension monitoring	5.31	.87
Debugging strategies	5.95	.72
Evaluation	5.28	.97
Metacognitive knowledge	5.60	.71
Regulation of cognition	5.56	.67

Table 33

Descriptive Statistics of Declarative Knowledge (In-Service Teachers)

Declarative knowledge	M	SD
I understand my intellectual strengths and weaknesses.	6.28	.71
I know what kind of information is most important to learn.	5.67	1.05
I am good at organizing information.	5.81	1.16
I know what I am expected to learn.	5.16	1.54
I am good at remembering information.	4.94	1.26
I have control over how well I learn.	5.26	1.19
I am a good judge of how well I understand something.	5.83	1.12
I learn more when I am interested in the topic.	6.47	.91

Table 34

Descriptive Statistics of Procedural Knowledge (In-Service Teachers)

Procedural knowledge	M	SD
I try to use strategies that have worked in the past.	6.13	.94
I have a specific purpose for each strategy I use.	5.37	1.06
I am aware of what strategies I use when I study.	5.07	1.50
I find myself using helpful learning strategies automatically.	5.30	1.21

Table 35

Descriptive Statistics of Conditional Knowledge (In-Service Teachers)

Conditional knowledge	M	SD
I learn best when I know something about the topic.	6.01	1.21
I use different learning strategies depending on the situation.	5.32	.99
I can motivate myself to learn when I need to	5.88	1.10
I use my intellectual strengths to compensate for my weaknesses.	5.64	.92
I know when each strategy I use will be most effective.	5.11	1.28

Table 36

Descriptive Statistics of Planning (In-Service Teachers)

Planning	M	SD
I pace myself while learning in order to have enough time.	5.45	1.15
I think about what I really need to learn before I begin a task.	5.77	1.06
I set specific goals before I begin a task.	5.41	1.21
I ask myself questions about the material before I begin.	4.77	1.5
I think of several ways to solve a problem and choose the best one.	5.32	1.25
I read instructions carefully before I begin a task.	6.37	1
I organize my time to best accomplish my goals	5.24	1.38

Table 37

Descriptive Statistics of Information Management Strategies (In-Service Teachers)

Information management strategies	M	SD
I slow down when I encounter important information.	6.15	.96
I consciously focus my attention on important information.	5.83	.97
I focus on the meaning and significance of new information.	6.01	.74
I create my own examples to make information more meaningful.	5.98	1.04
I draw pictures or diagrams to help me understand while learning.	5.60	1.51
I try to translate new information into my own words.	5.26	1.58
I use the organizational structure of the text to help me learn.	5.67	1.28
I ask myself if what I'm reading is related to what I already know.	6	1
I try to break studying down into smaller steps.	5.56	1.48
I focus on overall meaning rather than specifics.	5.47	1.32

Table 38

Descriptive Statistics of Comprehension Monitoring (In-Service Teachers)

Comprehension monitoring	M	S
I ask myself periodically if I am meeting my goals.	5.50	1.13
I consider several alternatives to a problem before I answer.	5.22	1.43
I ask myself if I have considered all options when solving a problem.	5.77	.80
I periodically review to help me understand important relationships.	5.32	1.07
I find myself analyzing the usefulness of strategies while I study.	4.77	1.55
I find myself pausing regularly to check my comprehension.	5.20	1.37
I ask myself questions about how well I am doing while learning something new.	5.39	1.27

Table 39

Descriptive Statistics of Debugging Strategies (In-Service Teachers)

Debugging strategies	M	SD
I ask others for help when I don't understand something.	5.96	1.10
I change strategies when I fail to understand.	5.39	1.16
I re-evaluate my assumptions when I get confused.	5.77	.93
I stop and go back over new information that is not clear.	6.18	.87
I stop and reread when I get confused.	6.47	.79

Table 40

Descriptive Statistics of Evaluation (In-Service Teachers)

Evaluation	M	SD
I know how well I did once I finish a test.	5.64	1.21
I ask myself if there was an easier way to do things after I finish a task.	4.88	1.62
I summarize what I've learned after I finish.	5.73	1.33
I ask myself how well I accomplish my goals once I'm finished.	5.35	1.30
I ask myself if I have considered all options after I solve a problem.	4.90	1.45
I ask myself if I learned as much as I could have once I finish a task.	5.16	1.45

Findings on the Relationship between Self-Efficacy Beliefs and Metacognitive Awareness of Pre-Service and In-Service EFL Teachers

In order to examine whether there is a relationship between self-efficacy beliefs and metacognitive awareness of the participants, a number of statistical analyses were conducted. Initially, normality tests were carried out on data collected from both pre-service and in-service teachers to determine if the variables had normal distribution. The analyses revealed that the data collected from pre-service teachers had normal distribution with Skewness of -.58 (*SE*=.24) and Kurtosis of .17 (*SE*=.48) and metacognitive awareness with Skewness of -.17 (*SE*=.24) and Kurtosis of -.9 (*SE*=.48) whereas data collected from in-service teachers did not have normal distribution with Skewness of -.79 (*SE*=.32) and Kurtosis of -.02 (*SE*=.64) for teacher self-efficacy and with Skewness of -.79 (*SE*=.32) and Kurtosis of 1.04 (*SE*=.64) for metacognitive awareness. The results of Kolmogorov-Smirnov test for both groups were considered for confirming normality of the variables.

Table 41

Tests of Normality (Pre-Service Teachers and In-Service Teachers)

	Kolmogorov-Smirnov			Kolmogorov-Smirnov		
	Statistic	Df	Sig.	Statistic	Df	Sig.
teacher self-efficacy	.068	96	.200	.139	53	.012
metacognitive awareness	.061	96	.200	.116	53	.072

Therefore, parametric Pearson Correlation Test was conducted on the data belonging to pre-service teachers while nonparametric Spearman Correlation test was employed for in-service teachers' data in order to analyze any possible relationship between the components of teacher self-efficacy beliefs and metacognitive awareness. The output of the analyses suggested that there was a strong and significant correlation between teacher self-efficacy and metacognitive awareness for both groups: pre-service teachers; $r(96)= .68$, $p<.001$ and in-service teachers; $r(53)= .66$, $p=.000$.

Overall, the data collected from both groups were compiled to address general teacher self-efficacy and metacognitive awareness. As also illustrated in the output of Kolmogorov-Smirnov Normality test below, variables did not have normal distribution with significant values; teacher self-efficacy with Skewness of -.71 (*SE*=.19) and Kurtosis of -.19 (*SE*=.39) and metacognitive awareness with Skewness of -.40 (*SE*=.19) and Kurtosis of .12 (*SE*=.39) ($p < .05$). Therefore, Spearman Correlation Test was conducted to analyze any correlation between the variables in the overall data.

Table 42

Normality Test of Overall Data

	Kolmogorov-Smirnov		
	Statistic	Df	Sig.
teacher self-efficacy	.077	149	.033
metacognitive awareness	.082	149	.015

The output of Correlation Coefficient indicated that there was a statistically significant relationship between teacher self-efficacy and metacognitive awareness of the participants ($r(149)= .65$, $p=.000$).

Findings on the Differences between Pre-Service and In-Service EFL Teachers' Self-Efficacy Beliefs and Metacognitive Awareness

In order to examine whether there is any difference in the levels of teacher self-efficacy beliefs and metacognitive awareness of both groups, a nonparametric Mann Whitney U test was conducted since neither of the variables (teacher self-efficacy and metacognitive awareness) had normal distribution; teacher self-efficacy with Skewness of -.71 (*SD*=.19) and Kurtosis of .19 (*SD*=.39) and metacognitive awareness with Skewness of -.40 (*SD*=.19) and Kurtosis of .12 (*SD*=.39) considering significant values of it as illustrated in the output of Kolmogorov-Smirnov test above.

With respect to output of Mann Whitney U test for self-efficacy beliefs, it was found out that there was no significant difference between pre-service (*Mdn*=6.91) and in-service (*Mdn*=6.95) teachers in the levels of self-efficacy beliefs (*U*=1450, *p*=.70). On the other hand, the output of Mann Whitney U test for metacognitive awareness suggested that the difference between pre-service (*Mdn*=5.25) and in-service (*Mdn*=5.71) teachers in the study was statistically significant with a moderate effect size (*U*=1965, *p*=.02, *d*=.3).

Considering the difference between the two groups in the levels of teacher self-efficacy and metacognitive awareness, it could be concluded that while there was no statistically significant difference between pre-service and in-service English language teachers in their perceived levels of self-efficacy beliefs, the difference between the two groups in their metacognitive awareness was significant.

Findings on Demographic Factors Effective in Perceived Levels of Pre-Service and In-service EFL Teachers' Self-Efficacy and Metacognitive Awareness

In order to examine any latent difference caused by demographic factors, variables included in the related section of the questionnaires were taken into consideration. With this regard, gender and academic performance were considered for the analyses of the data from the group of pre-service teachers whereas gender, experience and educational background were addressed for the analyses of the data from the group of in-service teachers in relation to their teacher self-efficacy beliefs and metacognitive awareness. In accordance with the number of

demographic factors and normality of the variables, statistical analyses were conducted.

Gender. The function of gender in any difference in the levels of self-efficacy and metacognitive awareness of pre-service teachers was analyzed by conducting parametric Independent Samples t-test (Student-t) since the variables of self-efficacy and metacognitive awareness had normal distribution with Skewness of -.58 (*SD*=.24) and Kurtosis of .17 (*SD*=.48) for self-efficacy and Skewness of -.17 (*SD*=.24) and Kurtosis of -.09 (*SD*=.48) for metacognitive awareness. The output of Kolmogorov-Smirnov test confirmed normality of the data (*p*=2). Student-t test conducted on pre-service teachers' data revealed that there was no significant difference between the mean values of the two groups, but levels of teacher self-efficacy were slightly higher for men (*M*=6.99, *SD*=.89) than women (*M*=6.7, *SD*=1.08), *t*(94)= 1.1, p>.05, *d*=0.2 with a small effect size. On the levels of metacognitive awareness, the data suggested that there was nearly no difference between women (*M*=5.26, *SD*=.91) and men (*M*=5.27, *SD*=.80), *t*(94)= .05, *p*>.05, *d*=.01.

As for the function of gender in in-service teachers' self-efficacy beliefs and metacognitive awareness in the study, the same statistical analyses as pre-service teachers' were conducted considering normality of distribution of the variables. The analyses revealed that dependent variables of teacher self-efficacy beliefs and metacognitive awareness did not have normal distribution (teacher self-efficacy with Skewness of -.79 (*SE*=.32) and Kurtosis of -.02 (*SE*=.64) and metacognitive awareness with Skewness of -.79 (*SE*=.32) and Kurtosis of (*SE*=.64) Kolmogorov-Smirnov test supported significant values of the variables (See Table 41 for the output of the normality test).

According to significance of values, a non-parametric Mann Whitney U test was carried out to analyze whether teacher self-efficacy and metacognitive awareness of in-service teachers differed as a function of gender. Consequently, the results of the analysis indicated that there was no statistically significant difference between the two groups (female; *Mdn*= 6.95 and male; *Mdn*= 6.91) considering their teacher self-efficacy (*U*= 140.5, *p*=.98, *d*=.0). Similarly, there was no significant difference between the two groups (female; *Mdn*=5.71 and male;

Mdn= 5.53) in the levels of metacognitive awareness (*U*=125.5, *p*=.66, *d*=.0) Overall, the data revealed that gender was not an effective factor in determining teacher self-efficacy and metacognitive awareness of both pre-service and in-service English teachers.

Academic performance (achievement). Another demographic variable that was investigated within the scope of the study was achievement level of pre-service teachers. In this sense, any probable difference in participants' self-efficacy and metacognitive awareness were examined as a function of academic achievement. For this purpose, the participants were categorized in three achievement groups based on their *GPA* as *1.50-2.99* (minimum score), *3.00-3.50* and *above 3.5*. Normality tests were carried out before further statistical analyses. Since the variables of teacher self-efficacy and metacognitive awareness were found to be normally distributed (See Table 41), a parametric One-way ANOVA was carried out to search for within and between group analyses among the variables academic achievement, means of teacher self-efficacy and metacognitive awareness to compare effect of academic performance on the levels of teacher self-efficacy and metacognitive awareness. Initially, Levene's statistics were considered for test of homogeneity of variances. While the variances had significant values (*p*=.012) for teacher self-efficacy, the values were not significant for metacognitive awareness (*p*=.110). To this end, the output of Bonferroni post-hoc tests were considered to analyze the effect of achievement levels on teacher self-efficacy and metacognitive awareness. Overall, the output of One-way ANOVA indicated a main effect of achievement levels on both teacher self-efficacy (F (2, 93) = 4. 97, p=.009, η_p^2=.097) and metacognitive awareness (F (2, 93) = 4.22, p=.017, η_p^2=.083). Posthoc test using Bonferroni suggested that the levels of teacher self-efficacy were higher for the group of above 3.5 (maximum GPA) than the group of 1.5-2.99 (minimum GPA) (*p*=.007). Similarly, levels of metacognitive awareness were higher for above 3.5 than 1.5-2.99 group (*p*=.01), thus, indicating that academic achievement was a significant factor in the difference in the levels of self-efficacy beliefs and metacognitive awareness of pre-service English teachers.

Experience. Teaching experience was regarded as one of independent variables that might affect the levels of teacher self-efficacy and metacognitive awareness of in-service teachers in the study. Accordingly, there were four groups

in the study related to years of experience; 0-5 years (*N*=2), 6-10 years (*N*=16), 11-20 years (*N*=25) and more than 20 (*N*=10).

In order to explore if there is any difference between the experience groups in their perceived levels of self-efficacy and metacognitive awareness, a non-parametric Kruskal Wallis H test was conducted following normality test since dependent variables of teacher self-efficacy and metacognitive awareness did not have normal distribution, but significant values (See Table 41 for the output of Kolmogorov-Smirnov normality test).

Concerning teacher self-efficacy, the analyses of Kruskal Wallis test revealed that there was no statistically significant difference between the groups ($H(3)=4.95$, $p=.17$ with mean ranks of 7 for 0-5 years group, 26.9 for 6-10 years group, 26.2 for 11-20 years group and 33 for more than 20 years group) in their perceived self-efficacy beliefs. In the same vein, as for metacognitive awareness, there was no significant difference between the groups ($H(3)= 1.91$, $p=.59$ with mean ranks of 34.5 for 0-5 years group, 25.1 for 6-10 years group, 25.6 for 11-20 years group and 31.9 for more than 20 years group) in the levels of metacognitive awareness.

In the aggregate, it emerged that experience did not cause a major difference between the groups in the levels of self-efficacy and metacognitive awareness of in-service English teachers.

Educational background. The probability of educational background to be a factor affecting self-efficacy beliefs and/or metacognitive awareness was addressed in this study. See Table 43 for the information on the participants' educational background.

Table 43

Educational Background of In-Service Teachers (N=53)

		N			N
completed degree	BA	20	ongoing degree	None	39
	MA	28		MA	2
	PhD	5		PhD	12

Since there were three groups of degrees, a non-parametric Kruskal Wallis H test was conducted after analyzing normality of the variables (See Table 41 for

normality test) in order to analyze whether completed or ongoing educational degrees have an effect on the difference in teacher self-efficacy and metacognitive awareness of the participants. To this end, the output of the analyses suggested that there was no statistically significant difference among the groups ($H(2)=1.02$, $p=.59$ with mean ranks of 27.4 for BA group, 25.6 for MA group and 33.1 for PhD group) in their self-efficacy beliefs with regard to their completed educational degrees. In the same vein, there was no significant difference among the groups in their metacognitive awareness ($H(2)=1.05$, $p=.59$ with mean ranks of 25.7 for BA group, 26.7 for MA group and 33.6 for PhD group)

As for possible difference caused by ongoing degrees, the same procedures were carried out. The results of non-parametric Kruskal Wallis H test suggested that there was no statistically significant difference in the self-efficacy beliefs ($H(2)=.47$, $p=.78$ with mean ranks of 27.8 for None group, 23.2 for MA group and 24.8 for PhD group) and metacognitive awareness ($H(2)=.35$, $p=.83$ with mean ranks of 27.1 for *None* group, 20.7 for MA group and 27.6 for PhD group) of in-service teachers among ongoing degree groups.

Overall data analyses indicated that there was no significant difference in teacher self-efficacy beliefs and metacognitive awareness of in-service teachers as function of educational background.

Analyses of Qualitative Data

In order to support quantitative data and get a deeper understanding of the results**,** semi-structured interviews were conducted with both pre-service and in-service groups. All participants who participated in the surveys were informed about the process and ethical issues of the study related to interviews, and the ones who agreed to participate in the interviews were regarded as the participants of the interviews. The participants of the interviews were selected randomly among volunteers taking a number of demographic information into account. Accordingly, latent effect of gender and academic performance was considered for the group of pre-service teachers while independent variables of in-service teachers group were gender, years of experience and educational background.

Interviews were held in May, 2019 on a scheduled program. Interviews with the pre-service teachers were conducted through video-conferencing whereas in-service teachers were interviewed face-to-face.

Both groups were informed about recording of the interviews and agreed on this procedure. In the semi-structured interviews, no direct questions were asked. Instead, the participants were encouraged to make explanations on the component in the question. Furthermore, the construct of the questions was the same for both groups while they were adapted appropriately for the target group. In this sense, the questions were as follows:

1. What do you think about your capabilities in planning, teaching, assessment and professional development? Do you think you are effective in them? If yes, what are your strengths? If no, what areas do you need to develop?
2. Do you think there are factors affecting your efficacy beliefs such as work load, stress and learner motivation?
3. Do you think you can make use of cognitive skills such as planning, checking comprehension while learning something?
4. Do you think you can make use of these skills in your teaching?

The data collected from these interviews were coded and analyzed with Nvivo12 Pro, and the content of them was as follows:

Teacher self-efficacy beliefs and metacognitive awareness of pre-service EFL teachers. The data from the interviews set forth the participants' reflection about their self-efficacy beliefs and metacognitive awareness considering their future teaching practices. They also reflected on their beliefs about factors that could affect their efficacy beliefs and how they benefit from their cognition in their career. See Table 44 for content analysis and the themes referred in the interviews:

Table 44

Content Analysis of the Semi-Structured Interviews (Pre-Service Teachers)

Theme	Frequency
High level of self-efficacy beliefs	7
Effect of undergraduate education	7
Effect of practicum	6
MA in learning	6
MA in teaching	6
Low level of self-efficacy beliefs	5
Conflict between theory and practice	5
Effect of school environment and communication with school people	4
Effect of experience	3
Effect of work load	3
Effect of low level of student motivation	3
Teacher motivation	2
Future anxiety	2

As illustrated in the table, the participants mostly stated factors that might have an impact on their efficacy beliefs and metacognition (See Table 45 and 46 for positive and negative comments on the variables).

Table 45

Positive Comments on the Variables (Pre-Service Teachers)

Theme	Frequency
High level of self-efficacy beliefs	7
Effect of undergraduate education	7
Effect of practicum	6
MA in learning	5
MA in teaching	4
Effect of experience	3
Teacher motivation	2

Table 46

Negative Comments on the Variables (Pre-Service Teachers)

	Frequency
Conflict between theory and practice	5
Low level of self-efficacy beliefs	5
Effect of school environment and communication with school people	4
Effect of work load	3
Effect of low level of student motivation	3
Future anxiety	2
MA in teaching	2
MA in learning	1

Detailed explanations about the analyses are as follows:

Quantitative analyses stated that there was no significant difference in the mean values of pre-service and in-service EFL teachers' self-efficacy beliefs. Yet, interviews revealed that perceived efficacy of the both groups was affected by a number of factors since the participants suggested a number of effective factors and areas for further development for themselves. Pre-service teachers' considered factors are as follows:

Considering lesson planning, nearly all participants stated that they believed they were good at it and they emphasized effectiveness of undergraduate education they completed. To this end, pre-service teachers stated that they got theoretical knowledge and opportunities to practice it through practicum process adequately during their training. See the extract from the interviews below:

PT5- male/ GPA; 1.5-2.99
I feel efficacious particularly about lesson planning thanks to high standard education we got at this university. I think I got trained even more than enough because we prepared too many lessons plans and were supervised too much. Therefore, I do not think that I will have any problems about lesson planning.

As for teaching component, it was found out that most of the participants (*N*=8) had lower levels of self-efficacy beliefs for it regardless of their gender and academic achievement, which supports the analyses of the questionnaires. The participants emphasized the difficulty of classroom management while working with children which they experienced during their practicum. In this regard, one of the participants expressed his ideas on discrepancy between theoretical background and practice during practicum. See the extracts below:

PT2- male/ GPA; 1.5-2.99
I think we should have practiced teaching in our third year, not in the last year, so we could have had more time to compensate for our weaknesses. For example, we could have taken the course of 'Teaching English to Children' after practicum. Thus, we could have reflected on our experience while learning related theories. It would not be so theory-based. Conversely, we took that course before practicum and it caused me to get confused because I cannot connect my experience with theories I learned before. Theories did not work as classroom conditions -especially while working with children- are very different from what theories suggest.

PT 3-female/ GPA; 1.5-2.99
I believe I definitely need to improve my abilities about classroom management because even during practicum, there used to be an experienced teacher with us (either the teacher at that school or our supervisor) and they would always lead us. I have no experience teaching children and managing class on my own. Although I know what is necessary to do for classroom management in theory, I do not think that I will be able to manage it well in practice. I mean I am not efficacious enough about that.

Apart from planning and teaching components, the participants reflected on their efficacy for assessment. While most of them responded positively, one participant indicated that she should improve herself. Interestingly, another participant expressed his negative beliefs and concerns about his future practices of assessment. See extract below:

PT12- male/ GPA; above 3.5
I have strong concerns about my future experience about assessment. I get nervous about possibility of burn-out, thus, not caring about students' success in the exams -let's say- in my teaching career of fifteen years. I am not sure about my feelings rather than my capabilities about this component. What is average of grades? What is the extent of student achievement compared to previous examinations? I am afraid to be indifferent about these questions as I get a more experienced teacher.

Lastly, content analyses suggested that all participants were positive about their professional development in the future. Furthermore, it emerged that they had plans on reflection and developmental practices. See the extract below:

PT8- female/ GPA; above 3.5
I am eager to participate in professional development activities in the future. I believe I can do that. Also, I am planning to keep a journal about my teaching. I would like to take notes about my experience through my teaching.

Overall, the data revealed that pre-service teachers' self-efficacy beliefs were higher for the components of planning and professional development than the components of teaching (particularly classroom management) and assessment. The participants considered their undergraduate education as a positively effective factor for their high level of efficacy, but they suggested that merely theoretical knowledge was not adequate to be efficacious unless it was practiced enough considering the problems that they had in applying theory in practice during their practicum.

As for metacognitive awareness of the participants, the data revealed that most of the participants were aware of their cognition while learning, but they highlighted significance of experience in transferring that awareness in their future

practices. In this sense, they mentioned discrepancy between theory and practice. See extracts below:

PT4- male/ GPA 1.5-2.99
I do not think that I use any strategies while learning. I just read between lines to learn anything. For example, I just read a text to learn vocabulary. I do not do more.

PT 9- female/ GPA; above 3.5
I believe that I need to gain more experience to transfer my knowledge about strategies in my teaching practices. Actually, I tried to do that throughout my practicum, but I could not manage to do that maybe because I had just two hours of practice a week, which is not enough or it could be result of being inexperienced yet, but I hope I will be better as I get more experience.

PT 11- female/ GPA; above 3.5
I think I am proficient at theoretical knowledge. I mean I get knowledge easily considering my communication with my professors throughout undergraduate years. I did not study much, but I learned but asking questions to my professors and analyzing what is told to me. I am aware of my knowledge not only about education but also about my daily life. I know I can use cognitive skills well, but I think I have difficulty in transferring that knowledge and skills in my teaching.

Contextual factors in pre-service EFL teachers' perceived levels of self-efficacy beliefs and metacognitive awareness. While commenting on the variables, the participants stated a number of factors that could affect their perceptions either positively or negatively (See Table 47 for the stated factors)

Table 47

Contextual Factors Affecting Pre-Service Teachers' Efficacy and Metacognition

Positive effect		Negative effect	
Theme	Frequency	Theme	Frequency
Undergraduate education	7	Conflict between theory and practice	5
		School environment and communication with	4
Practicum	6	school people	
Experience	3	Work load	3
		Low level of student motivation	3

To this end, they considered work load, school climate (communication with colleagues, administration and students) that could have a negative impact on their future career whereas their undergraduate education, experience during practicum were thought to have a positive effect. See extracts on the next page:

PT1-male/ GPA; above 3.5
I have serious concerns about the city I might go because some of my friends have started to work as a teacher in districts where they have to carry water to their home. Thinking about such a possibility decreases my motivation, thus efficacy beliefs.

PT2- male/ GPA; 1.5-2.99
Maybe, my communication with administrative staff and my colleagues could affect me.

While pre-service English language teachers perceive their efficacy and cognition as stated above, it is necessary to analyze qualitative data collected from in-service in-detail to detect any possible similarities between the two groups.

Self-efficacy beliefs and metacognitive awareness of in-service EFL teachers. Based on the interview questions, the participants expressed their ideas on the components of teacher self-efficacy and metacognitive awareness. They also indicated a number of factors that could be related to their beliefs and awareness levels. See Table 48 for the content analysis of the interviews and frequency of each theme was referred by the participants.

Table 48

Content Analysis of the Semi-Structured Interviews (In-Service Teachers)

Theme	Frequency
Effective factors in the variables	33
Metacognitive awareness in teaching	10
Low level of self-efficacy in professional development	9
Metacognitive awareness in learning	8
The effect of experience	8
High level of self-efficacy in planning	8
The effect of class dynamics	7
The effect of low level of student motivation	5
The effect of educational background (undergraduate and postgraduate degrees)	5
Low level of self-efficacy in teaching	4
Low level of self-efficacy in assessment	4
Conflict between theory and practice	4
High level of self-efficacy in teaching	3
High level of self-efficacy in assessment	2
The lack of support by the school	2
Need for appraisal	2
High level of self-efficacy in professional development	1

As could be seen in the table, the teachers were inclined to comment on the same themes for their self-efficacy beliefs and metacognitive awareness either positively or negatively. See Table 49 and 50 for the related categories.

Table 49

Positive Comments on the Variables (In-Service Teachers)

Theme	Frequency
High level of self-efficacy in planning	7
High level of self-efficacy in teaching	3
High level of self-efficacy in assessment	2
High level of self-efficacy in professional development	1
Metacognitive awareness in learning	5
Metacognitive awareness in teaching	4
Effective factors (educational background; undergraduate and graduate degrees, experience)	13

Table 50

Negative Comments on the Variables (In-Service Teachers)

Theme	Frequency
Low level of self-efficacy in teaching	4
Low level of self-efficacy in assessment	4
Low level of self-efficacy in professional development	9
Metacognitive awareness in learning	3
Metacognitive awareness in teaching	6
Effective factors (effect of class climate, lack of student motivation, conflict between theory and practice, lack of support by the institution, need for appraisal)	20

Considering the high number of reference for effective factors, it could be stated that they are affected by the same factors for their beliefs and awareness. Detailed description of each theme is as follows:

In the interviews, the participants expressed ideas on their beliefs about how they consider themselves as an English teacher in reference to the components of self-efficacy beliefs in the survey; lesson planning, teaching, assessment and professional development. Content analysis of the interviews revealed that they commonly felt more efficacious in the area of planning considering no negative comment on this area, which was in line with quantitative data demonstrating higher mean values for the component of planning. Further analysis of this component suggested that the teachers were aware of class dynamics, so they were flexible in their practices and always had a back-up plan if their plan did not work. The reason for flexibility was referred as low level of student motivation that causes failure of the activities and success of the activities that requires extra time for working on the

same activity. Under these conditions, the teachers stated that they could adapt their plans and carry on with what could be best for their students, which also highlights their metacognitive awareness. In this sense they believe they are good at lesson planning. See extracts from the interviews below:

T1- female/ 11-20 years of experience/ BA degree
I do not focus much on lesson planning. Well, I plan a framework but class dynamic is so important that sometimes your plan might not work. Thus, I go to class with alternatives and back-up plans and choose among them in the lesson. So, yes, I believe I am efficacious in lesson planning.

T2- female/ 15 years of experience/ PhD.
I think I am efficacious in lesson planning and teaching practices, but I am trying to do my best to improve myself with the awareness that a teacher always has something to learn from others. My strengths are planning lessons well and being able to be flexible and implement B plans when necessary while teaching. Like all teachers, I think I should spend more time and effort on my professional development because depending on new technologies and trends, one can and should improve his/her skills at any time. As for assessment, I do not do much because I do not have to do that as there are other teachers who work for assessment issues in my institution. I can only evaluate my students through the activities in the classroom and plan my lessons accordingly.

T14-female/ 6-10 years of experience/ MA degree
I feel efficacious in lesson planning, but I sometimes have problems in time management because of emerging needs of students. For example, they ask a question -but of course about learning English- and I see that they are all interested in that topic, so I stop the activity and spend more time on what they are interested in.

T6-female/6-10 years of experience/ MA degree
I feel efficacious in lesson planning and teaching. You know you do a task in class, but you still have extra time and immediately I plan a filling activity that works well.

T13- female/ 11-20 years of experience/ BA
I think my strengths in lesson planning is the result of the courses and practicum during my undergraduate degree. They were very effective and I made use of them in the lessons during practicum. I gained positive experiences during that learning and teaching process.

As for teaching component, the teachers have either positive or negative beliefs about their self-efficacy about various procedures in teaching such as assigning pairs and groups, time or classroom management or engaging students.

T4- female/ 11-20 years of experience/ BA
With respect to teaching, I have problems about assigning pair-work or group-work. Moreover, I think I have problems about motivating students when topic is boring or engaging all students.

T11- male/ 11-20 years of experience/ MA degree, ongoing degree; PhD.
While I feel efficacious in lesson planning, I am not efficacious enough to implement that lesson plan as I always have problems about time management. I cannot estimate how much time I need for an activity, so I plan a lot of activities beforehand. Yet, I cannot find time to use them in the lesson, so I think I am bad at it.

T3-female/ 6-10 years of experience/ BA, ongoing degree; MA
I believe I feel more efficacious in teaching with experience and by integrating new technologies and innovations in my practices.

Language assessment was another component of teacher self-efficacy in which the participants had positive, negative and neutral beliefs. Being neutral stems from the fact that there is an assessment unit to conduct standardized examinations at the institution. Therefore, the teachers do not need to prepare any exams on which a number of teachers commented negatively as they thought it was an inhibiting factor for them to improve their skills in assessment. Positive beliefs were about in-class assessment procedures such as giving corrective feedback or grading students' work while negative beliefs were about the need to improve themselves in assessment practices. See positive or negative comments in the extracts from the interviews:

T7-female/ 6-10 years of experience/ BA degree
I do not think that I am efficacious in assessment. I believe that I need to get training on it.

T11-male/ 11-20 years of experience/ MA/ ongoing degree; PhD.
We do not need to assess our students as these practices are carried out by the assessment unit at our school, but I would probably not feel efficacious if I had to do that because even though I had formal courses on assessment, they were all theory driven. I was not taught how to conduct in-class assessment procedures or I could not practice enough. Assessment is not easy, so I do not want to deal with it.

T6- female/ 6-10 years of experience/ MA degree
I try to do my best to assess students objectively, for example while grading papers. I do not consider my feelings or relationship with students while grading, so I feel efficacious in it.

Self-efficacy in professional development which is one of the focuses of this study as it has been neglected in the literature was found to be a highly important component among the participants. Only one participant expressed her positive beliefs about it whereas the others commented on effective factors (lack of financial support or appraisal by the institution or the feeling of burn-out).

T9- female/ 6-10 years of experience/BA
I feel efficacious in professional development because I do not like to be the same teacher over the years. Every year, I would like to learn new things and contribute to my knowledge. I evaluate my practices at the end of each academic year. I reflect on my strengths and areas to improve. As a result, I search for books or training programs that are on the areas to improve for me.

T4- female/ 11-20 years of experience/ BA degree
I need to confess that I do not do my best for professional development. For example; I do not participate in the conferences or read reference books in the field. However, I do not resist it. I mean, I welcome new ideas or classroom observation. The area for further improvement could be professional development for me. I would better learn how to communicate with students.

T5- male/ 11-20 years of experience/ PhD. Degree
I cannot say that I am efficacious in professional development because your participation in these events or activities is limited if you do not have any support by your institution, which is the case in our context.

T6-female/ 6-10 years of experience/ MA degree
There is no end of learning, so of course I need to develop myself professionally. I think I need to participate in workshops or seminars more to get informed about innovations in language teaching.

T13-female/ 11-20 years of experience/ BA
I have some concerns about professional development. I do not think that conferences or workshops are effective ways of professional development as they are in a vicious circle.

T14- female/ 6-10 years of experience/ MA degree
I feel disappointed when I think about professional development. The year when I was completing my MA degree I learned a lot and I was very excited to try them in my teaching. Yet, my excitement went down in years. Maybe it was caused by students' low level of motivation as I did not want to make effort when students were reluctant to learn English. I thought all my effort was in vain, so I stopped trying and learning new things.

Overall, qualitative data were in line with quantitative data in that there were not significant differences among in-service teachers as function of gender, experience and educational background in the levels of self-efficacy.

The other component of the study and the interviews was metacognitive awareness. Since the quantitative data addressed metacognitive awareness of teachers while learning something, the questions in the interviews addressed both learning and teaching processes. As a whole, content analysis of the interviews supported that the participants were relatively aware of their metacognition in terms of *regulation of cognition* as they stated that they use a number of strategies and plans both for their learning and teaching. Yet, there were participants who stated

that they could not transfer that awareness in their lessons and classes due to class dynamic and student profile. See extracts from the interviews about teaching metacognitive awareness of in-service teachers**.**

T8- female/ 11-20 years of experience/ MA
I use figures and tables more because I like studying by grouping and revising. If I do not understand what I am reading, I stop and cannot move on without figuring it out.

T7-female/ 6-10 years of experience/ BA
If I am motivated, I like studying by grouping, drawing tables, taking notes and revising regularly.

T2- female/ 15 years of experience/ PhD.
Visualizing is important for me or leading from familiar to unfamiliar, most frequent to least frequent, these are among cognitive skills that I use the most and I use them in my teaching, too. You know there is famous saying: the way you learn become the way you teach, so I think I can transfer my knowledge and cognitive skills in my teaching in different pace of a lesson.

T9-female/ 6-10 years of experience/ BA
I like organizing things while learning to make it more effective. I think I have a high level of self-regulation. Once, I used to study by taking notes. When I started to my profession, I gained self-awareness. For example, I discovered that I express myself or learn better by drawing tables. Also, I realized that my visual memory is stronger and I preferred to study by making use of it. Now, I like studying with colorful pens and papers, which increases my motivation.

T11- male/ 11-20 years of experience/ MA, ongoing degree; PhD.
I do not think that I am aware of how I learn, actually, I do not know it, but when I internalize the knowledge, connect it with my experience and practice it, I learn well- at least I am aware of it. Apart from this, I do nothing. Drawing tables, making regulations and etc. do not make sense to me. I also know that my self-regulation skills are not developed, which is an area to improve for me, but I do not use them. In summary, I am cognitively aware of these skills and I know that using them will be effective, but I do not make use of them on purpose: I have awareness, but I do not use it.

T12- male/ 6-10 years of experience/ MA, ongoing degree; PhD.
It is very important to use strategies in teaching, which is part of metacognition and I believe that I use a lot of strategies. I am aware that using strategies or other regulatory skills and motivating yourself to use them despite work load is related to metacognition. I think I am good at it.

T14- female/ 6-10 years of experience/ MA
I benefit from cognitive skills while learning something and I can apply them. It is OK for me because I am aware of my strengths and weaknesses while learning; I know what I can do well or cannot do and how I learn- you know I got enough time for that considering I was a student for sixteen years, but I cannot take advantages of these skills in my teaching practices because there are many students in class who have different abilities, learning styles and cognitive skills and it is not easy to make adjustment for all of them. I try my best, but…Thus, I prefer to give individual projects or homework and I see that students are happy with them as they can study on their own style. I believe that everyone should be aware of how they learn.

T7-female/ 6-10 years of experience/ BA
I can transfer cognitive skills in my teaching. For instance; I encourage students to study by grouping. While studying vocabulary, I try to learn a word with its antonym, so I recommend it to my students or I encourage them to draw tables, brainstorm ideas.

T1- female/ 11-20 years of experience/ BA
I can make use of cognitive strategies in my lessons. For example, I see a picture that is similar to the one that I used before and worked well and I think about using it while teaching X tense. It is led by my creativity and planning or I find an activity on the internet and think over how I can make use of it in my lesson plan considering my previous lessons.

Contextual factors in in-service EFL teachers' perceived levels of self-efficacy beliefs and metacognitive awareness. While demographic factors were examined through quantitative data, semi-structured interviews revealed a number of contextual factors that were likely to affect how in-service EFL teachers perceive their self-efficacy and metacognitive awareness. Table 51 illustrates the factors suggested by the participants in that regard.

Table 51

Contextual Factors Affecting In-Service Teachers' Efficacy and Metacognition

Positive effect		Negative effect	
Theme	Frequency	Theme	Frequency
Experience	8	Class dynamics	7
Graduate degree	4	Student motivation	5
Undergraduate degree	1	Conflict between theory and practice	4
		Lack of support by the institution	2
		Need for appraisal	2

As also demonstrated in the table, associated factors which had the highest frequency were experience and educational background in a positive sense and class dynamics and lack of student motivation in a negative sense. In addition, conflict between theory and practice which meant to be a difficulty in applying even the practices that could be regarded as the best into classroom situation was found to be another most frequent theme in the content analyses. To this end, pre-service and in-service EFL teachers were similar in their perception since pre-service teachers also regarded conflict between theory and practice as a negatively effective factor especially for their self-efficacy beliefs. Both groups stated that they were confused between what is prescribed to them and what they really could do in their language classes which are so dynamic and include distinct student profiles.

Seemingly, a conflict between theory and practice is a stated factor for influencing both language teaching and teacher education.

See extracts from the interviews below that present indicated factors by the participants.

T2- female/ 15 years of experience/ PhD.
I feel more efficacious especially after starting to PhD. Now, I believe I am better in classroom management or instruction. This belief could also be caused by experience. Well, postgraduate education has helped me get an awareness about my capabilities, and experience has made me perform accordingly. However, I do not think that educational background itself works for effectiveness, but other factors make contributions to it.

T14- female/ 6-10 years of experience/ MA
Realizing that students are unmotivated, I feel unmotivated and down, too and I feel inefficacious. I think it is because of me, if it were not me, but another teacher, they would not be so unmotivated, which makes me feel anxious. When I talk to my colleagues, I notice that they also feel in that way, then, I feel better. So, students' mood is very important affecting teacher motivation and efficacy because if you experience this problem through years, it makes you feel that you are not efficacious even though it is not always the case.

T11-male/ 11-20 years of experience/ completed degree; MA, ongoing PhD.
I think technological improvements affect a teacher's self-efficacy. Well, actually, I would say learner motivation. I know it is a cliché, but it is definitely the case for us. We wonder why we could not motivate them. Maybe, it is because of us or our techniques and practices are not appealing to them. Overall, they affect a teacher's efficacy either positively or negatively.

T7-female/ 6-10 years of experience/ BA
…students' level and my communication with them affect me as a teacher. Students' misbehaviors make me unmotivated. As a result, I feel inefficacious and I do not try to get over this belief.

T5- male/ 11-20 years of experience/ PhD. Degree
In theory, my cognitive skills are at a high level, but when it comes to classroom practices, there are other factors in question; class and school dynamics and personal factors hinder transferring those skills in classroom practice. You make regulations based on theories, but in fact, you realize that real conditions are so different and your plans do not work under those circumstances.

In conclusion, semi-structured interviews put forward results which support quantitative data and explain the teachers' self-perception about the variables in detail followed by emerging factors influencing their perceived efficacy beliefs and cognition. Overall, both quantitative and qualitative data revealed significant findings regarding change in efficacy beliefs and metacognition of an English teacher in light of a number of factors from being a candidate to an expert language teacher.

Conclusion

This chapter has presented in-depth analyses of data collected from the survey and semi-structured interviews. Next chapter will cover discussion of these results in light of review of literature on the components of the study, implications emerging based on these results and conclusion.

Chapter 5
Conclusion, Discussion and Suggestions

Introduction

This chapter presents findings of the study with their discussion in accordance with existing literature on the variables; teacher self-efficacy and metacognitive awareness. Furthermore, pedagogical implications that are based on the findings, limitations of the study and suggestions for further studies will be covered in this chapter.

Discussion on Self-Efficacy Beliefs of Pre-Service and In-service EFL Teachers

Data analysis of the questionnaires and semi-structured interviews revealed findings about the source of self-efficacy beliefs for pre-service and in-service as well as their perception about their capabilities related to specific areas of language teaching. Even though there was no direct research question about the sources of self-efficacy beliefs, data collected from semi-structured interviews revealed that *mastery experiences*, *social persuasion* and *physiological arousal* were the main sources of self-efficacy beliefs for the participants (especially for in-service teachers) considering that the teachers in the interviews were aware about their capabilities and they referred positive effect of experience or lack of support by the institution. As for pre-service teachers, positive statements about their future teaching career are evidence for the source of self-efficacy beliefs, which is social persuasion. Secondly, some of the in-service teachers in the interviews mentioned the effect of their mood in their self-efficacy beliefs, which refers to physiological arousal.

The findings about source of self-efficacy are in line with a number of studies in the literature referring to mastery experiences (eg., Clark & Newberry, 2018; Tschannen-Moran & Woolfolk Hoy, 2007). For instance, in the study of Tschannen-Moran and Woolfolk Hoy (2007) that was conducted in three different settings in the USA with the participation novice and experienced teachers suggested mastery and vicarious experiences as the main sources of self-efficacy for novice teachers. Moreover, contextual factors were found to be effective in self-efficacy beliefs of

novice teachers while the effect was not much for experienced teachers, which is not supported by the current study as experienced teachers in the interviews also considered them as effective in their efficacy.

Conversely, social persuasion as the main source of self-efficacy for teachers was stated in studies (eg., Şahin & Atay; Phan & Locke, 2015; Yada et al, 2019). Thus, the current study is in accordance with the findings of these studies. For instance, specific to EFL context, the current study corresponds to findings of the study of Phan and Locke (2015) carried out with eight Vietnamese EFL teachers in a qualitative study design. However, that study and other studies (eg., Tschannen-Moran & Johnson, 2011) suggested that not only these sources but also contextual factors affect self-efficacy beliefs of teachers. Since one of the focuses of the current study is to investigate possible factors for self-efficacy and metacognitive awareness of English language teachers, the findings are significant as they revealed many effective contextual factors, which are to be discussed later in this chapter. The findings on the sources of efficacy beliefs are also important since there is lack of research in the field of English language teaching compared to other teaching areas. Thus, this study that indicates social persuasion as the main source of self-efficacy beliefs both for pre-service and in-service English language teachers followed by the effect of a number of contextual factors provides evidence and support to the related literature.

As for components of self-efficacy, one of the gaps in the literature is lack of data collection instruments that directly address specific areas of language teaching since existing instruments are generally on teaching capabilities for common areas such as classroom management and student engagement. Yet, this study addresses the components of lesson planning, teaching, assessment and particularly professional development, which is significant since new trends and innovations especially in the 21st century poses a need for teachers to improve themselves to fulfil requirements of effective language teaching. Thus, it is highly important to examine how English language teachers perceive their efficacy in professional development, which was the missing piece in the teacher self-efficacy research and literature. Furthermore, pre-service EFL teachers' self-efficacy is addressed through that scale, specifically designed for them with items on their

future teaching practices rather than assuming them as having so many experiences as in-service teachers do, which is among the contributions of this study to existing research.

The findings of this study suggested that the highest level of self-efficacy beliefs of pre-service teachers was for the component of planning while there was no significant difference in the levels of in-service teachers' self-efficacy for the components except for professional development, which is reported to be caused by lack of support. Additionally, high-level of pre-service teachers' self-efficacy for the component of teaching was found to be a result of effective undergraduate education stated by most of the participants. Yet, the conflict is that while they stated that their undergraduate education had a positive effect on their efficacy beliefs, which is in accordance with the existing research (eg., Sevimel & Subaşı, 2018), they also complained that there was a mismatch between theory and practice in their undergraduate education supporting previous research (eg, Atay, 2007; Seferoglu, 2006). Therefore, there seems to be a dilemma in their real beliefs about the effect of undergraduate education, which could be related to awareness and cognitive skills in that they could not evaluate themselves in the training process and since it seems to be the fact in Turkey considering existing research on the mismatch between theory and practice in pre-service EFL teacher education programs or positive effect of pre-service EFL teacher education, a need to raise prospective teachers' awareness in their training process through reflective practices, which is part of metacognition.

Discussion on Metacognitive Awareness of Pre-Service and In-service EFL Teachers

Metacognitive awareness was addressed through MAI (Schraw & Dennison, 1994) and semi-structured interviews. Data analyses revealed that there was a significant difference between pre-service and in-service language teachers in the levels of their awareness. To this end, it was found out that the two groups were both aware of their knowledge and how they regulate their cognition despite the difference in the awareness levels of *evaluation*. Accordingly, it was found out that pre-service English language teachers in the study had lower levels for evaluation than in-service teachers compared to other components of metacognition, which is

not in accordance with the study of Şendurur et al (2011) revealing pre-service teachers' high-level of awareness for the component of evaluation. Furthermore, the analyses revealed that both pre-service and in-service teachers had higher values for metacognitive knowledge than regulation of cognition, which is in line with the study of Şendurur et al. (2011).

On the components of metacognition, the current study supports existing research in other fields of teaching (eg., Koç & Kuvaç, 2016; Lee, et al., 2010). For instance, in Turkish setting, Koç and Kuvaç (2016) investigated pre-service science teachers' metacognitive awareness and found out that those teachers had higher levels of awareness for *declarative* and *procedural knowledge* than *conditional knowledge*, and they had highest level of awareness for *debugging strategies* as opposed to lowest score for the component of *evaluation*. Similar to that study, the present study puts forward that pre-service EFL teachers' awareness for the component of *evaluation* was lower than their awareness for other components, which was the result in earlier studies (eg., Lee, et al, 2010). Therefore, it is necessary to investigate why this is the common issue related to pre-service teachers in Turkey and around the world in various field of teaching.

Specific to the items of the components and the field of ELT, this study proposes findings that are similar to the study of Sarıçoban (2015), who studied with the 1st year ELT students. With this regard, years of training whether they are in the first or last year were found to have no impact on pre-service EFL teachers' metacognitive awareness since the findings on the components of metacognitive knowledge and regulation in the both studies were in accordance.

In the literature, there is lack of research on metacognitive awareness of language teachers as it tends to be a research interest in other fields of teaching. For example, Bulut (2018) searched for metacognition of pre-service classroom and pre-school teachers and revealed that they had a high level of metacognitive awareness in the same way as the pre-service EFL teachers in this study. Therefore, it is necessary to support previous research with new findings from different fields of teacher education to understand pre-service teachers' metacognition better. For this purpose, demographic factors or variables that could

have an impact on metacognitive awareness have been focused on in the literature and in this study, which is presented in the following section related to factors.

In addition to lack of research on pre-service EFL teachers' metacognition, metacognitive awareness of in-service EFL teachers is even more limited as also stated in the literature (eg., Duffy et al. 2005; Wilson & Bai, 2010). Thus, the findings of the current study are significant as it provides evidence for existing research. For example, the findings are in accordance with the study of Nahrkhalaji (2014), exploring metacognition of in-service EFL teachers in Iran and suggested that these teachers' metacognitive awareness is highly related to their teaching performance in consideration of teaching experience and educational background that are discussed in the section of factors effective in teacher self-efficacy and metacognitive awareness.

Discussion on the Relationship between Self-Efficacy Beliefs and Metacognitive Awareness of Pre-Service and In-Service EFL Teachers

One of the research concerns of the current study was to examine whether there was a relationship between the levels of perceived self-efficacy and metacognitive awareness of language teachers. For this purpose, data collected from both groups through scales on the variables aforementioned were analyzed quantitatively. Since the data were found to have significant values in the normality test, a non-parametric Spearman Correlation test was conducted to reveal any probable relationship. Data analyses suggested that there was a strong correlation between perceived levels of teacher self-efficacy and metacognitive awareness.

Even though there is limited research on the connection between teacher self-efficacy beliefs and metacognitive awareness of language teachers, the related finding supports previous research either on pre-service or in-service teachers in other fields of teaching (eg., Alkan & Erdem, 2014, Ghonsooly, et al, 2014; Yıldız & Akdağ, 2017). For instance, in their quantitative study conducted with 246 pre-service chemistry teachers in Turkey through scales on the variables, Alkan and Erdem (2014) revealed that there was a relationship between self-efficacy beliefs, chemistry competence and metacognitive awareness of the participants even though significance of correlation stated was low (r=.2). The current study provides

further support for the pinpointed relationship by presenting both data from the perspectives of pre-service and in-service teachers and evidence demonstrating a statistically significant relationship (r=.69).

Despite limited number of them, there have been few attempts that associate teacher self-efficacy and metacognitive awareness in ELT research (eg., Alcı & Yüksel, 2012; Ghonsooly, et al, 2014). To this end, Alcı and Yüksel (2012) investigated whether there was any connection between teacher self-efficacy beliefs, metacognitive awareness and academic achievement of 143 pre-service English language teachers in a quantitative study design and set forth that the three variables were highly connected concepts, but academic performance was more related to participants' self-efficacy beliefs rather than their metacognitive awareness. Therefore, the current study supports that there is a significant relationship between teacher self-efficacy beliefs and metacognitive awareness of English language teachers.

This finding is also in line with the study of Ghonsooly et al (2014), who searched for any relationship between teacher self-efficacy beliefs and metacognitive awareness among pre-service English language teachers associated with their academic performance in Iran. Contrary to findings of Alcı and Yüksel's (2012) study, this study revealed that although there was a correlation between teacher self-efficacy, metacognitive awareness and academic achievement, metacognitive awareness was found to be a better predictor of academic achievement. As previously stated, this finding is supported partially by the finding of the current study that suggests a strong relationship between teacher self-efficacy and metacognitive awareness since none of the focuses of this study was to analyze the best predictor of academic achievement. Still, the findings are in accordance as they both highlight a relationship between teacher self-efficacy and metacognitive awareness. With regard to contribution of this study to existing research, it could be asserted that it provides solid support for the discussion to generalize findings, especially for research in ELT by presenting evidence from not only pre-service but also in-service English language teachers.

Discussion on the Differences between Pre-Service and In-Service EFL Teachers in Self-Efficacy Beliefs and Metacognitive Awareness

While self-efficacy beliefs and/or metacognitive awareness have been investigated in the related literature, there has been lack of interest in the comparison between pre-service and in-service teachers, particularly in language teaching. However, research in the related field could put forward findings that enhance understanding of change and factors effective in it. Therefore, this study focused on making a comparison between pre-service and in-service English language teachers on their self-efficacy beliefs and metacognitive awareness. In this respect, quantitative data collected from the participants were analyzed by conducting nonparametric Mann Whitney U test due to non-normal distribution of the data. The analyses suggested that while there was no significant difference between the two groups in their self-efficacy beliefs, there was a statistically significant difference between pre-service and in-service EFL teachers in their metacognitive awareness.

On the difference between pre-service and in-service teachers, there is not as much research in language teaching as in other branches of teaching. To this end, in one of the earlier attempts in other branches of teaching, Campbell (1996) investigated whether there was a difference between pre-service and in-service science teachers with a comparison in two countries; Scotland and the U.S.A. The findings of this study suggested that despite no significant difference in self-efficacy beliefs of teachers in the two countries, there was a significant difference between pre-service and in-service teachers in their perceived levels of teacher self-efficacy in both countries. Accordingly, it emerged that in-service teachers had higher levels of self-efficacy than pre-service teachers, and demographic factors of age and years of experience were effective in the difference. In that respect, there is a discrepancy between the findings of Campbell's (1996) study and the current study that revealed no significant difference between the two groups.

Tschannen-Moran and Hoy (2007) compared self-efficacy beliefs of novice and experienced teachers by also addressing sources of their efficacy. The study that was conducted with 255 novice and experienced teachers revealed that experienced teachers had higher levels of self-efficacy than novice teachers, and

mastery experiences were found to be main source for their efficacy beliefs whereas it was *social persuasion* for novice teachers. As a conclusion, that study proposed that contextual factors were less important for experienced teachers than novice teachers in affecting teacher self-efficacy.

In a similar vein, this study does not support findings of Chan's (2008) study that aimed to investigate Chinese pre-service and in-service teachers' self-efficacy beliefs with general and domain-specific aspects through scales developed for the purpose. The study revealed that in-service teachers had higher levels of efficacy than pre-service teachers, thus implying experience as an important factor for high-level of efficacy and effective in the difference between the groups.

Azar (2010) also carried out a quantitative study focusing on differences between pre-service and in-service secondary science teachers in their self-efficacy beliefs and any possible change in the beliefs. Contrary to Campbell's (1996) study, the study of Azar (2010) revealed that there was no statistically significant difference between the two groups in their teacher self-efficacy beliefs, thus, no change was traced in the beliefs with regard to experience or other demographic factors such as gender, which is supported by the related finding of this study.

In Turkish EFL context, the current study supports one of the previous studies on any similarities or differences between pre-service and in-service teachers, which was conducted by Dolgun and Caner (2019). That study carried out with 75 pre-service and 105 in-service EFL teachers proposed no significant difference between the two groups in their self-efficacy beliefs. This study not only supports that research but also aims to contribute to existing studies by explaining probably emerging differences in terms of demographic and contextual factors.

In addition to findings related to self-efficacy beliefs, the findings on metacognitive awareness could be associated with findings of previous studies. One of these studies was conducted by Metallidou (2009), who compared use of problem solving strategies of pre-service and in-service primary school teachers. The findings of this study suggested teachers were aware that each problem requires a specific solving strategy, but in-service teachers were better in using problem solving strategies than pre-service teachers in their metacognition. The participants

considered age and experience as effective factors for their awareness. That awareness levels of in-service teachers were higher than pre-service teachers was supported by the current study. Yet, the findings revealed no effect of age and experience.

Overall, discussion about the difference between pre-service and in-service language teachers in their teacher self-efficacy and metacognition could not be sufficiently related to existing research since there is lack of research in question. However, a comparison of the two groups for the variables of the study, which is neglected in the related literature could lead to a need for further research and that would contribute to understanding of the factors in language teacher education and teaching profession, which has been discussed in the following part:

Discussion on the Factors Effective in Pre-Service and In-Service EFL Teachers' Perceived Levels of Self-Efficacy and Metacognitive Awareness

As connected to any relationship or difference between pre-service and in-service language teachers in their self-efficacy beliefs and metacognitive awareness, the current study further analyzed possible factors effective in it both quantitatively and qualitatively. Quantitative data were analyzed for the function of demographic factors whereas qualitative data were analyzed to reveal any relevant factors. To this end, data on gender, academic achievement, years of experience and educational background were associated with the mean values of the variables. As data collected from pre-service teachers had normal distribution, Independent Samples T-test (Student-t) and One-way ANOVA were conducted while Mann Whitney U and Kruskal Wallis H tests were performed on in-service teachers' data due to its non-normal distribution.

As for the findings related to function of demographic factors, it emerged that among all factors, only academic achievement led to group differences. In other words, there was no difference among the groups in their teacher self-efficacy beliefs and metacognitive awareness in terms of gender, years of experience and educational background. Furthermore, qualitative data revealed that contextual factors such as school setting, undergraduate education, opportunities to practice teaching through practicum, a mismatch between theoretical courses and real

classroom conditions were the factors stated by pre-service language teachers while contextual factors such as low level of student motivation, lack of support by the institution and classroom setting were indicated by in-service teachers.

Up to now, majority of research on the variables of the study (teacher self-efficacy and metacognition) has focused on the effective factors related to them. To that end, while academic performance has been reported to be an effective demographic factor for pre-service teachers (eg., Alcı & Yuksel, 2012 for teacher self-efficacy; Simsek & Balaban, 2010; Young & Fry, 2008 for metacognitive awareness), years of experience, teaching motivation and burn-out have been among the factors effective in in-service teachers' self-efficacy (eg., Caprara et al, 2006; Chen & Yeung, 2015). Yet, not only do most of these studies focus on pre-service teachers, but also the number of studies in language teacher education and teaching is limited. Thus, it is particularly necessary to provide evidence for the factors affecting both pre-service and in-service language teachers' self-efficacy and metacognition as they might have an impact on effective language teaching in turn.

Among demographic factors, change has been widely addressed in self-efficacy beliefs of pre-service teachers whereas gender and academic achievement have been most commonly explored factors as associated with levels of their metacognition. Specifically, in language teacher education, studies have been conducted in order to examine change in prospective language teachers' self-efficacy beliefs in light of effective factors (eg., Atay, 2007; Hoy & Spero, 2005; Pfitzner-Eden, 2016; Wang, et al., 2015). Similar to methodology of the current study, Atay (2007) searched change in self-efficacy beliefs of pre-service EFL teachers through practicum in a mixed-method study and while the findings of quantitative data revealed that there was a positive change in the levels of teacher self-efficacy of the participants because of teaching practice through practicum, focused-group interviews revealed that discrepancy between theory and practice stated by the participants for the mismatch between content of their methodology courses and real classroom conditions that they experienced during practicum process was a negative factor for their self-efficacy.

In a later attempt, Yüksel (2014) investigated change in self-efficacy beliefs of pre-service EFL teachers in consideration of sources of efficacy beliefs and found out that level of these teachers' efficacy beliefs got higher through years of training, particularly after teaching practice, and *mastery experiences* and *social persuasion* were main sources for their efficacy. Thus, the findings of the current study support that study as the data on pre-service teachers who were in their last year of training -similar as the participants of Yüksel's (2014) study- revealed that they had a high level of teacher self-efficacy, and interviews support *social persuasion* as one of the main sources of efficacy.

One of the other associated factors with self-efficacy beliefs of pre-service teachers in all fields of teacher education is gender accompanied by various factors. With this regard, Merç (2015) explored self-efficacy beliefs of pre-service English language teachers with its connection to speaking anxiety considering gender and school setting as possible factors for any difference. The findings revealed that there was a significant relationship between these two concepts, but neither gender nor school setting was effective in this connection, which is supported by the findings of this study that revealed no effect of gender on teachers' efficacy beliefs.

Ercan-Demirel (2017) investigated pre-service EFL teachers' self-efficacy beliefs with regard to gender and age variables. While that study revealed no significant difference between the two gender groups in their overall self-efficacy, it emerged that female teachers had higher values for their efficacy in student engagement. As for age variable, it emerged that there was no difference among age groups in their self-efficacy. Considering overall findings of that study, it could be concluded that the current study is in line with that study revealing no effect of gender variable as a demographic factor.

In one of the later attempts on the effective factors in perceived levels of self-efficacy beliefs in language teacher education, Sevimel and Subasi (2018) supported the findings of Atay's (2007) study. To that end, findings of the mixed-method study in which data were collected from 113 prospective EFL teachers through scales and focused-group interviews suggested that the factors affecting the participants' self-efficacy beliefs were their undergraduate education, practicum, language proficiency and also feelings and moods. In that respect, it was reported

that undergraduate education had a negative impact on their self-efficacy since it was mainly theoretical and was not reflected into real classroom setting. On the other hand, practicum was reported to have a positive impact on their efficacy beliefs as they could practice teaching during their education.

The findings of the current study are in line with the two studies and others (eg, Karakaş, 2012; Seferoglu, 2006; Yazan, 2016) since they report a discrepancy between theoretical courses and real classroom setting. However, as also discussed aforementioned, while they report a conflict between theoretical courses and real classroom setting, they also emphasize positive effect of their education on their high level of efficacy, which is in line with previous research (eg., Sevimel & Subaşı, 2018). Thus, the conflict is in contradictory findings in the literature even with the same setting and participants as in the current study.

As for contextual factors having an impact on in-service English language teachers' self-efficacy beliefs, the current study proposed that the main factor was low level of student motivation making those teachers feel inefficacious about their teaching capabilities. In a general sense, this finding is significant since it has been proposed in the literature that contextual factors have no effect on in-service teachers' self-efficacy beliefs (eg., Tschannen-Moran & Hoy, 2007). However, the current study suggested that there were a number of contextual factors influencing in-service EFL teachers' perceived self-efficacy beliefs such as low level of student motivation and class dynamics. In the literature, it is a common finding that high-level of teacher self-efficacy leads to student motivation (eg., Duffin, French & Patrick, 2012; Mojavezi & Tamiz, 2012), which is one of the associated factors with teacher self-efficacy. For instance, Mojavezi and Tamiz (2012) researched whether teacher self-efficacy beliefs had a role in student motivation through a quantitative study that was carried out with 80 high school teachers and 50 high school students in Iran, and data analysis revealed that high-level of teacher self-efficacy was positively correlated with student motivation. Contrary to that study and previous studies on the same connection, the current study presents an opposing connection by highlighting negative effect of low level of student motivation on teacher self-efficacy and supports discussion from perspective of teachers rather than learners.

Klassen and Chiu (2010) explored in-service teachers' self-efficacy beliefs as function of experience, gender, job satisfaction or stress. The findings suggested that self-efficacy, job satisfaction or stress were related concepts depending on the levels of efficacy. To this end, teachers had higher levels of self-efficacy when they were in their mid-career and their efficacy decreased through retirement. While quantitative data of the current study do not support the study of Klassen and Chiu (2010) and previous ones (eg., Caprara et al., 2006; Schwarzer & Hallum, 2008; Skalvik & Skalvik, 2010) considering nearly equal values for self-efficacy of both groups, qualitative data suggested that in-service teachers were likely to experience burn-out caused by contextual factors, which could support the studies in question. As for gender, female teachers had more stress than male teachers stemming from low level of efficacy, thus suggesting gender was an effective factor for self-efficacy beliefs. Neither of these findings were supported by the findings of the study considering insignificant difference between the groups in the mean values of the gender, which is caused by the unequal numbers of the participants for the comparison especially for in-service teachers (female; *N*=47, male; *N*=6)

Findings on the demographic factors influencing metacognitive awareness of pre-service and in-service teachers conform with previous research which is mainly in different fields of teaching rather than language teaching (eg., Baş, 2016; Koç & Kuvaç, 2016). For instance, Koç and Kuvaç (2016) suggested that gender was not a factor causing a difference in the levels of metacognitive awareness of pre-service science teachers, but years of training had an effect on the difference among pre-service teachers in their metacognition. Considering these findings, it could be implied that the current study that focused on EFL teachers' metacognition supports that study since it also revealed no effect of gender, but a difference between pre-service and in-service teachers in the *regulation of cognition*, which refers that metacognitive awareness increases through years of training or experience.

In one of the recent studies on demographic factors leading a difference between or among groups in their metacognitive awareness, Ekici et al (2019) looked into function of demographic factors that are gender, academic achievement, years of training and department in metacognition of pre-service teachers from various departments. The findings of that study stated that only academic

achievement and years of training led to group difference in metacognitive awareness, which is supported by the findings of the current study that considered academic achievement as a significant factor having an impact on pre-service teachers' metacognition, but not gender.

In relation to research on metacognitive awareness of EFL teachers in Turkey regarding associated concepts and demographic factors, the current study supports existing research suggesting no significant effect of demographic factors such as gender (eg, Öz (2005; 2014; 2015; 2016). Studies of Öz (2005; 2014; 2015; 2016) conducted with pre-service EFL teachers revealed no relationship between their metacognitive awareness and concepts such as academic motivation, and the researcher suggested that pre-service teachers be trained on how to regulate their cognition. This study supports that suggestion considering the findings on pre-service teachers' lower level of awareness for the component of *evaluation*, which is significant especially for reflecting on teaching experiences and, in turn, for professional development. Moreover, even though proposed related concepts were found to have no connection with metacognitive awareness, a number of contextual factors were indicated in the interviews by the participants, and it suggests that there are factors affecting ÊFL teachers' reflecting their cognitive skills in classroom practice. Nevertheless, the point is in-service teachers' metacognitive awareness, EFL teachers in the context of the study, has not been explored as much as pre-service teachers'. Thus, this study is of importance as it explains metacognitive awareness of in-service teachers and why they cannot reflect it into their teaching practices, which refers to contextual factors.

To conclude, the current study sets forth that while teacher self-efficacy and metacognitive awareness were significantly related variables, there was no significant difference in the levels of self-efficacy and metacognitive awareness between pre-service and in-service EFL teachers as both groups had high levels of the variables. Yet, demographic factors of academic achievement and contextual factors reported by the participants were found to play a role in the perception of them in their self-efficacy and metacognition, which leads to implications below.

Pedagogical Implications

The current study that aims to investigate perceived levels of self-efficacy beliefs and metacognitive awareness of pre-service and in-service English language teachers puts forward implications that could be considered in language teacher education and language teaching. To start with, the findings revealed that pre-service and in-service EFL teachers had a high level of efficacy beliefs for lesson planning which is also involved in metacognitive awareness. However, in-service teachers had lower levels of efficacy beliefs for the component of professional development compared to the components of planning, teaching and assessment while pre-service teachers' beliefs about their professional development in their future teaching practice were high. Thus, the study suggests that there is a discrepancy between beliefs and real conditions related to language teaching profession. Therefore, it is necessary to provide more opportunities for English language teachers to develop professionally. To this end, a number of the participants indicated that work load and lack of support were among factors affecting their professional development. Furthermore, it was reported that they did not believe in the importance of attending conferences that are basically theoretical. Instead, they emphasized importance of continuous professional development that is based on their actual needs related to teaching practices and that is embedded in the vision of the institution where they work. In conclusion, it is essential that continuous professional development be permanently involved in school programs, and teachers should be encouraged or supported for professional development, which is especially important in 21st century in which keeping up with new technological improvements or applying cognitive skills is of great importance.

As for the findings related to metacognitive awareness, they implied that pre-service teachers' level of awareness for the component of *evaluation* referring to thinking over all processes involved and alternatives when finishing a task was lower than the other components. The aspect of evaluation is significant in regulating cognition as it engages people in reflecting on their practices, which could be considered as a key to success since it reveals strengths and points to improve. Thus, reflection and evaluation should always be a part of language teacher education programs especially in micro-teaching practice through practicum and

opportunities for prospective teachers to reflect on their teaching experience should be increased, and they should be encouraged to make multifaceted evaluation on their teaching.

This study also revealed that there was a strong relationship between self-efficacy beliefs and metacognition of English language teachers. Therefore, it could be implied that language teachers' metacognition and how they could transfer that awareness in their practices is highly related to their self-efficacy, in turn, their successful performance. However, the participants in the study stated that they could not transfer their metacognition into their practices as they wish for a couple of reasons: One of the stated reasons by pre-service teachers was lack of opportunities for micro-teaching (only two hours a week). Therefore, it is necessary to enhance prospective language teachers' metacognition by providing them with more opportunities for reflecting on their teaching practice, and they could also reflect on their efficacy beliefs, which emerged in the data analyses. As to in-service English language teachers in the study, they considered class dynamics, student motivation and not being able to be flexible in class as some of the reasons for not being able to transfer their metacognition in their practices. To this end, while lack of student motivation is still an issue that should be taken into consideration seriously, there are ways to provide teachers with flexibility in their teaching practices. For this purpose, current language programs in which teachers are expected to follow a syllabus or pacing strictly should be revised in a way that lets them be more flexible. Thus, they could find opportunities to apply more strategies or practices that demonstrate their metacognition and foster their self-efficacy beliefs.

The main proposed factors that could affect pre-service and in-service language teachers' self-efficacy beliefs and metacognitive awareness were found to be a reported mismatch between theoretical courses and real classroom setting for pre-service teachers and lack of student motivation for in-service teachers. In the curriculum that has been proposed by Council of Higher Education (CoHE) for ELT departments in Turkey includes four hours of teaching practice (two each term) in the last year of undergraduate education. The participants' views about a mismatch between theory and practice tend to be caused by the fact that they take theoretical

courses through their first-three years and only have a chance to practice teaching in their last year. In that respect, opportunities for them to practice teaching could be increased in the curriculum. Thus, they could turn theory into practice better and could find ways to apply their skills and knowledge in their teaching and set solid beliefs based on their experience as two hours of teaching practice a term could not be sufficient to have realistic goals for their future teaching experience. Moreover, as part of teacher education, sooner than the senior year, these teachers could be provided with opportunities to foster their metacognition by making them critically think over and find solutions on classroom conditions that they would probably encounter in their teaching career.

Lack of student motivation was considered as the main factor affecting in-service language teachers' self-efficacy and metacognition. In a century when higher order cognitive skills are prompted and emphasized, it is of major importance to find ways to increase learner motivation as it is the fundamental issue in learning. Handling this issue seriously and finding solutions for lack of student motivation for language learning has a domino effect possibly resulting in improvement in language teaching, fostering 21st century skills and leading to teacher motivation and self-efficacy. Furthermore, professional development activities on how to deal with low level of student motivation could be conducted as part of in-service training.

Overall, this study presents pedagogical implications of providing more opportunities for prospective language teachers to practice teaching in teacher education in which they can transfer their knowledge into practice in multifaceted ways and providing opportunities and support for in-service language teachers' continuous professional development that should be to-the point and on real classroom conditions.

Limitations of the Study

This study has a number of limitations. To start with, considering importance of it for language teacher education and teaching, metalinguistic awareness that could be defined as "knowledge about language" including awareness of phonological, lexical, grammatical features of a language as well as pragmatic and socio-cultural issues (Ellis, 2004; Thornbury, 1997) was also involved as one of the

variables in the study and it was connected to teacher self-efficacy and metacognitive awareness in the initial research design. Nevertheless, ambiguity in conceptualizing of the construct hindered to move on with this concept as the researcher could not find supporting research that was in accordance with presumed variables. Since metacognitive awareness is an overarching concept that could also be applicable to linguistic aspects and language context, a decision was made to remove metalinguistic awareness and carry on research with the concepts of teacher self-efficacy and metacognitive awareness.

The study that focuses on self-efficacy beliefs and metacognitive awareness of pre-service and in-service language teachers was conducted at one of the leading state universities in Turkey with 96 senior students of ELT department and 53 English lecturers working at the School of Foreign Languages of the university. The reason for carrying out the study merely in this specific setting was that multi-setting conditions that are to be considered for conducting research in various settings could make it difficult to obtain reliable data as demographic and background aspects in different settings are likely to affect the results, thus, could impede it to generalize findings. Therefore, the study was conducted in only one setting with appropriate number of the participants that represents the population best. Yet, inequality in the numbers of the participants for both groups was inevitable and the data were analyzed by assuming that the participants responded honestly.

Within the scope of the study, a scale on pre-service language teachers' self-efficacy beliefs was developed and validated, and also adapted for in-service teachers. Based on the assumption that the participants responded fairly, data analyses revealed that it was a one-factor construct, but factor loads may differ in other settings, which can be further analyzed.

Suggestions for Further Studies

Depending on the research design and findings of the current study**,** there are a number of suggestions for further research. First, as aforementioned, the scale that was developed for pre-service language teachers *(PLTES)* could be employed in further validation studies. Moreover, it could be adapted by including other specific areas related to language teaching or new scales on language teachers' self-efficacy (both pre-service and in-service teachers) could be developed by referring

to Bandura's (1997) principle of *task specifity* since available scales even commonly used ones in language teaching research (eg., Chacón, 2005) only address general teaching areas of *instructional strategies, classroom management and student engagement* (eg., Tschannen-Moran, 2001).

Second, the current study explored self-efficacy beliefs and metacognition of pre-service and in-service English language teachers. As there is lack of research on these variables among pre-service and in-service language teachers, there is still a need to increase the number of the studies conducted on this purpose. Thus, the study can be replicated in other settings both in Turkey and around the world with languages apart from English.

Conclusion

Having a mixed-method design, this study aims to address self-efficacy beliefs and metacognitive awareness of pre-service and in-service English language teachers, which is stated to be neglected in the related literature. Furthermore, the two variables of the study, teacher self-efficacy and metacognitive awareness were analyzed for any possible relationship that could help to interpret notion of effective language teaching requiring language teachers to have knowledge and a number of qualities and skills coinciding improvements in technology and the field. Being in a century in which cognitive skills and types of social interaction such as collaboration have been highlighted as 21st century skills makes metacognitive awareness and self-efficacy significant concepts in language teacher education and teaching. Therefore, the two groups were compared about the levels of their efficacy and metacognition considering that any similarities or differences between the groups in the variables of the study could help revealing and understanding of possibly connected issues. In addition, factors (both demographic and contextual) that could affect self-efficacy and metacognitive awareness of the participants were examined for in-depth analysis, so gender, years of experience and educational background were considered for in-service teachers whereas gender and academic achievement were addressed for pre-service teachers.

In light of these research purposes, the design of the study involved quantitative data that were collected at one of the leading state universities in Turkey

with 96 senior students of ELT department and 53 English lectures working at the School of Foreign Languages of the same university by employing two valid and reliable scales on the variables and qualitative data collected through semi-structured interviews that were used to support the quantitative data. The scales were Pre-service Language Teachers' Efficacy Scale (*PLTES)* that was developed by the researcher stating a need to develop such a scale since existing scales address general teaching capabilities in the areas of *student engagement*, *instructional strategies* and *classroom management* regardless of the field. Yet, it is conflicting with the aspect of *task specificity* (eg., Bandura, 1997; Tschannen-Moran & Hoy, 2001) involved in self-efficacy. Besides, available teacher self-efficacy scales address pre-service teachers in the same way as in-service teachers, but lack of teaching experience could result in difficulty for prospective teachers to internalize the items. Thus, a scale comprising of planning (also part of metacognition), teaching, assessment and professional development was designed and validated for pre-service language teachers with a construct addressing beliefs about their future teaching experience, and it was adapted for in-service language teachers. As for metacognitive awareness, *Metacognitive Awareness Inventory (MAI)* (Schraw & Dennison, 1994) was used to collect data. While quantitative data revealed statistical results in a general sense, qualitative data proposed an in-depth analysis revealing factors related to teachers' perceived levels of self-efficacy and metacognitive awareness.

Data analyses were conducted by using SPSS version 23 for the quantitative data and Nvivo 12 Pro for coding the themes. Analyses of quantitative data included descriptive statistics, both parametric and nonparametric tests (Pearson/Spearman Correlation tests, Student-t/Mann Whitney U tests, One-way ANOVA/ Kruskal Wallis H tests whereas content analysis was conducted for qualitative data. The analyses revealed that pre-service teachers had a high level of efficacy for their future teaching experience on all of the components involved in the construct while in-service teachers had slightly lower levels for their efficacy in professional development. Moreover, there was a statistically significant relationship between self-efficacy and metacognitive awareness of the participants. As for similarities or differences between the two groups in the variables of the study, it emerged that there was no statistically significant difference between the groups, stating no

change in the beliefs and metacognition through teaching experience. To this end, demographic factors of experience, educational background and also gender were found to have no effect in the difference for in-service teachers. For pre-service teachers, while there was no difference between female and male teachers, it emerged that academic achievement was effective in the difference among the groups in self-efficacy and metacognitive awareness. Besides, content analyses of the interviews revealed that main reasons stated by the participants for contextual factors effective in the levels of perceived self-efficacy and metacognitive awareness were lack of student motivation for in-service teachers and a discrepancy between theoretical courses during undergraduate education and real classroom conditions for pre-service teachers.

Based on these findings, this study proposes a number of implications that could contribute to improvement of language teacher education programs and teaching such as encouraging professional development of in-service teachers and providing more opportunities for pre-service teachers to practice teaching with more focus on real classroom conditions. Thus, both groups could have a chance to promote their metacognition by increasing their knowledge and transferring that knowledge in their practices through cognitive skills, which, in turn, increases levels of perceived self-efficacy and contributes to effective language teaching.

In sum, the current research emphasizes that teacher self-efficacy and metacognitive awareness are two related concepts combining psychology and cognition, and they shape a teacher's practices that are expected to be effective for achieving teaching related tasks. Specific to language teacher education and teaching, fostering language teachers' efficacy beliefs and metacognition is of major importance in an era when knowing languages other than native languages is nearly a must.

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APPENDIX-A: Consent Form

Bu çalışma, Prof. Dr. Nuray Alagözlü danışmanlığında yürütülen, Hacettepe Üniversitesi İngiliz Dili Eğitimi Ana Bilim Dalı'nda doktorasını yapmakta olan Ümran Üstünbaş'a ait doktora tezi çalışmasıdır. Çalışmanın amacı, İngilizce öğretmen eğitiminin iki önemli etmeni olan öğretmen öz yeterliliği ve üst bilişsel farkındalık arasındaki olası ilişkileri ortaya koymak ve ortaya çıkan bulgulara dayanarak İngilizce öğretmen yetiştirme programlarının etkili olmasında rol oynayabilecek birtakım etmenlere ışık tutmaktır. Bu amaçla; araştırmacı, katılımcıların ilgili etmenlere yönelik tutum ve eğilimleriyle ilgili bilgi toplamayı hedeflemektedir. Çalışmanın verisi, geçerlilik güvenilirlik analizleri yapılmış iki anketin uygulanması ve katılımcılarla görüşmeler yapılması yoluyla toplanacaktır. Çalışmanın yürütülebilmesi için gerekli olan izin, Hacettepe Üniversitesi Etik Komisyonu'ndan alınmıştır.

Çalışmaya katılım tamamıyla gönüllülük temelinde olmalıdır. Anketlerde, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamen gizli tutulacak ve sadece araştırmacı tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayımlarda kullanılacaktır. Anketler, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakmakta serbestsiniz. Bu durumlar dışında çalışma konusunda herhangi bir sorunuzun olması durumunda katılım onayınızı vermeden önce bu sorularınızı araştırmacıya yöneltebilir, cevaplarını makul bulmanız koşuluyla katılımınızı onaylayabilirsiniz. Çalışmayla ilgili soru ve yorumlarınızı araştırmacıya uustunbas@beun.edu.tr adresinden iletebilirsiniz.

Araştırmaya katıldığınız için şimdiden teşekkür ederiz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda bırakabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum.

Katılımcı	**Sorumlu Araştırmacı**
Tarih:	Tarih:
Adı Soyad:	Adı Soyad:
Adres:	Adres:
Tel:	Tel:
İmza	İmza:

APPENDIX-B: Pilot Study Questionnaire

Dear Prospective EFL Teacher,

This questionnaire includes items for pilot study of a scale development process that have been designed on pre-service EFL teachers' self-efficacy beliefs as part of a PhD thesis supervised by Prof. Dr. Nuray ALAGÖZLÜ. If you agree on participation in the pilot study, please choose options from 1 to 9 appealing to you. Your responses are highly confidential. Thank you for your participation and support.

Ümran Üstünbaş

Pre-Service Language Teachers' Efficacy Scale		**How much can you do?**								
		None								A lot
1	How well do you believe you will be able to plan activities considering their pace and variety?	1	2	3	4	5	6	7	8	9
2[1]	How well do you believe you will be able to use technological tools in the classroom (e.g., software, the internet)?	1	2	3	4	5	6	7	8	9
3*	How much do you believe you will be able to follow blogs or read articles to keep up with new trends in language teaching?	1	2	3	4	5	6	7	8	9
4	How well do you believe you will be able to integrate activities including different language skills into your plan?	1	2	3	4	5	6	7	8	9
5	How well do you believe you will be able to engage different learners in classes (through pace, timing and variety)?	1	2	3	4	5	6	7	8	9
6*	How well do you believe you will be able to use voice, body language and attitude to communicate with the class?	1	2	3	4	5	6	7	8	9
7*	How well do you believe you will be able to apply level descriptors of references to assess proficiency across language skills?	1	2	3	4	5	6	7	8	9
8	How well do you believe you will be able to integrate professional development procedures and activities into your teaching?	1	2	3	4	5	6	7	8	9
9*	How well do you know language teaching theories and approaches that provide a basis for your practices?	1	2	3	4	5	6	7	8	9
10*	How much do you believe you will be able to use classroom language appropriate to the level of the learners?	1	2	3	4	5	6	7	8	9
11[2]	How much do you believe you will be able to use classroom language appropriate to the level of the learners?	1	2	3	4	5	6	7	8	9
12	How much do you believe you will be able to engage in self-development activities in various contexts?	1	2	3	4	5	6	7	8	9

[1] Removed based on the results of factor analyses

[2] Removed based on the comments in the pilot study

		None								A lot
13	How well do you believe you will be able to provide good and correct models of language such as pronunciation for learners?	1	2	3	4	5	6	7	8	9
14[3]	How much do you believe you will be able to engage in professional self-development activities to improve your social skills?	1	2	3	4	5	6	7	8	9
15	How well do you believe you will be able to use basic techniques in different pace of a lesson to promote learning of the target language?	1	2	3	4	5	6	7	8	9
16	How well do you believe you will be able to critically assess your teaching through experience and other reflection tools?	1	2	3	4	5	6	7	8	9
17*	How well do you believe you will be able to give clear instructions for basic classroom procedures?	1	2	3	4	5	6	7	8	9
18*	How much do you know about developmental phases in language learning?	1	2	3	4	5	6	7	8	9
19*	How well do you believe you will be able to follow the curriculum or course syllabus prescribed for a specific class hour or week?	1	2	3	4	5	6	7	8	9
20*	How well do you believe you will be able to plan your lesson in line with personal and intellectual needs of your students?	1	2	3	4	5	6	7	8	9
21	How well do you believe you will be able to monitor classroom learning to identify learning needs and achievement?	1	2	3	4	5	6	7	8	9
22	How well do you believe you will be able to distinguish differences between language levels in terms of knowledge and skills to be assessed?	1	2	3	4	5	6	7	8	9
23	How well do you believe you will be able to establish a positive rapport as part of effective learning?	1	2	3	4	5	6	7	8	9
24	How well do you believe you will be able to use appropriate techniques for assessment to ensure learners are assessed fairly?	1	2	3	4	5	6	7	8	9
25	How well do you believe you will be able to deal with cultural issues as part of your teaching practices?	1	2	3	4	5	6	7	8	9
26*	How well do you believe you will be able to plan activities to develop learner autonomy?	1	2	3	4	5	6	7	8	9
27	How well do you believe you will be able to set up and monitor activities through pair and group-work?	1	2	3	4	5	6	7	8	9
28	How well do you believe you will be able to identify learners' errors and use techniques to correct them?	1	2	3	4	5	6	7	8	9
29	How well do you believe you will be able to design alternative activities in case your lesson plan does not work?	1	2	3	4	5	6	7	8	9

[3] Removed based on the results of factor analyses

		None								A lot
30*	How much do you know about cultures of countries where English is spoken?	1	2	3	4	5	6	7	8	9
31	How well do you believe you will be able to adapt course materials in a way that appeals to your objectives and lesson plan?	1	2	3	4	5	6	7	8	9
32	How well do you believe you will be able to respond students about meaning and use of a specific language form?	1	2	3	4	5	6	7	8	9
33	How well do you believe you will be able to integrate alternative assessment tools into your testing practices?	1	2	3	4	5	6	7	8	9
34	How much do you believe you will be able to consider educational and psychological theories related to language learning in your practices?	1	2	3	4	5	6	7	8	9
35[4]	How much do you know about post-method approach in language teaching?	1	2	3	4	5	6	7	8	9
36*	How well do you believe you will be able to provide feedback to students about their achievement based on the results of any assessment procedures?	1	2	3	4	5	6	7	8	9
37**	How well do you believe you will be able to design tests with high level of washback effect (testing corresponding to teaching)?	1	2	3	4	5	6	7	8	9
38	How much do you believe you will be able to collaborate with your colleagues in order to improve your teaching practices?	1	2	3	4	5	6	7	8	9
39[5]	How much do you believe you will be able to participate in educational conferences and seminars to improve your teaching?	1	2	3	4	5	6	7	8	9
40*	How much do you know about differences between dialect of English (eg., American-British English) ?	1	2	3	4	5	6	7	8	9

[4] Removed based on the results of factor analyses

[5] Revised based on the comments in the pilot study

APPENDIX C. Pre-service Language Teachers' Efficacy Scale

Dear Prospective English Language Teachers,

This scale involves items on various aspects of language teachers' self-efficacy beliefs as part of a PhD. dissertation. In order to obtain valid and reliable results, your contribution into the research is of great importance. Thus, if you accept to participate in, please select the best option that appeals to you (from 1 (the lowest) to 9 (the highest))

Ümran Üstünbaş

	Pre-service Language Teachers' Efficacy Scale	**How much can you do?**								
		None								A lot
1	How well do you believe you will be able to respond students about the function of a specific language form?	1	2	3	4	5	6	7	8	9
2	How well do you believe you will be able to monitor classroom learning to identify learning needs and achievement?	1	2	3	4	5	6	7	8	9
3	How well do you believe you will be able to distinguish differences between language levels in terms of knowledge and skills to be assessed?	1	2	3	4	5	6	7	8	9
4	How well do you believe you will be able to establish a positive rapport as part of effective teaching?	1	2	3	4	5	6	7	8	9
5	How well do you believe you will be able to use appropriate techniques for assessment to ensure learners are assessed fairly?	1	2	3	4	5	6	7	8	9
6	How well do you believe you will be able to integrate alternative assessment tools into your testing practices?	1	2	3	4	5	6	7	8	9
7	How well do you believe you will be able to identify learners' errors and use techniques to correct them?	1	2	3	4	5	6	7	8	9
8	How well do you believe you will be able to design alternative activities in case your lesson plan does not work?	1	2	3	4	5	6	7	8	9
9	How well do you believe you will be able to engage different learners in classes?	1	2	3	4	5	6	7	8	9
10	How well do you believe you will be able to use basic techniques in different pace of a lesson to promote learning of the target language?	1	2	3	4	5	6	7	8	9
11	How much do you believe youwill be able to provide good and correct models of language such as pronunciation for learners?	1	2	3	4	5	6	7	8	9
12	How well do you believe you will be able to integrate activities including different language skills into your lesson plan?	1	2	3	4	5	6	7	8	9
13	How well do you believe you will be able to critically evaluate your teaching through various reflection tools?	1	2	3	4	5	6	7	8	9

		None								A lot
14	How well do you believe you will be able to integrate professional development procedures and activities into your teaching?	1	2	3	4	5	6	7	8	9
15	How much do you believe you will collaborate with your colleagues in order to improve your teaching practices?	1	2	3	4	5	6	7	8	9
16	How well do you believe you will be able to adapt course materials in a way that appeals to your objectives and lesson plan?	1	2	3	4	5	6	7	8	9
17	How much do you believe you will consider educational and psychological theories related to language learning in your practices?	1	2	3	4	5	6	7	8	9
18	How well do you believe you will be able to deal with cultural issues as part of your teaching practices?	1	2	3	4	5	6	7	8	9
19	How well do you believe you will be able to design tests conforming to your objectives?	1	2	3	4	5	6	7	8	9
20	How well do you believe you will be able to plan your lessons considering the pace and varieties of activities?	1	2	3	4	5	6	7	8	9
21	How much do you believe you will engage in self-development activities in various contexts?	1	2	3	4	5	6	7	8	9
22	How well do you believe you will able to set up and monitor activities through pair and group-work?	1	2	3	4	5	6	7	8	9
23	How much do you believe you will participate in educational conferences, seminars, webinars and MOOCs etc. to improve your teaching?	1	2	3	4	5	6	7	8	9

DEMOGRAPHIC INFORMATION

Your.....

- Gender A) Female B) Male
- Age A) 20-26 B) 27-35 C) 36-45 D) 45+
- GPA (genel not ortalaması) A) below 1.5 B) 1.5-3.00 C) +3.00-3.50 D) above 3.50

APPENDIX-D: Language Teachers' Efficacy Scale

Dear Colleagues

This scale involves items on various aspects of language teachers' self-efficacy beliefs as part of a PhD. dissertation. In order to obtain valid and reliable results, your contribution into the research is of great importance. Thus, if you accept to participate in, please select the best option that appeals to you (from 1 (the lowest) to 9 (the highest))

Ümran Üstünbaş

	Language Teachers' Efficacy Scale	**How much can you do?**								
		None								A lot
1	How well can you respond students about the function of a specific language form?	1	2	3	4	5	6	7	8	9
2	How well can you monitor classroom learning to identify learning needs and achievement?	1	2	3	4	5	6	7	8	9
3	How well can you distinguish differences between language levels in terms of knowledge and skills to be assessed?	1	2	3	4	5	6	7	8	9
4	How well can you establish a positive rapport as part of effective teaching?	1	2	3	4	5	6	7	8	9
5	How well can you use appropriate techniques for assessment to ensure learners are assessed fairly?	1	2	3	4	5	6	7	8	9
6	How well can you integrate alternative assessment tools into your testing practices?	1	2	3	4	5	6	7	8	9
7	How well can you identify learners' errors and use techniques to correct them?	1	2	3	4	5	6	7	8	9
8	How well can you design alternative activities in case your lesson plan does not work?	1	2	3	4	5	6	7	8	9
9	How well can you engage different learners in classes?	1	2	3	4	5	6	7	8	9
10	How well can you use basic techniques in different pace of a lesson to promote learning of the target language?	1	2	3	4	5	6	7	8	9
11	How much can you provide good and correct models of language such as pronunciation for learners?	1	2	3	4	5	6	7	8	9
12	How well can you integrate activities including different language skills into your lesson plan?	1	2	3	4	5	6	7	8	9
13	How well can you critically evaluate your teaching through various reflection tools?	1	2	3	4	5	6	7	8	9
14	How well can you integrate professional development procedures and activities into your teaching?	1	2	3	4	5	6	7	8	9

		None								A lot
15	How much do you collaborate with your colleagues in order to improve your teaching practices?	1	2	3	4	5	6	7	8	9
16	How well can you adapt course materials in a way that appeals to your objectives and lesson plan?	1	2	3	4	5	6	7	8	9
17	How much do you consider educational and psychological theories related to language learning in your practices?	1	2	3	4	5	6	7	8	9
18	How well can you deal with cultural issues as part of your teaching practices?	1	2	3	4	5	6	7	8	9
19	How well can you design tests conforming to your objectives?	1	2	3	4	5	6	7	8	9
20	How well can you plan your lessons considering the pace and varieties of activities?	1	2	3	4	5	6	7	8	9
21	How much do you engage in self-development activities in various contexts?	1	2	3	4	5	6	7	8	9
22	How well can you set up and monitor activities through pair and group-work?	1	2	3	4	5	6	7	8	9
23	How much do you participate in educational conferences, seminars, webinars and MOOCs etc. to improve your teaching?	1	2	3	4	5	6	7	8	9

DEMOGRAPHIC INFORMATION

Your.....

- Gender A) Female B) Male
- Age A) 22-26 B) 27-35 C) 36-45 D) 45+
- Years of experience A) 0-5 B) 6-10 C) 11-20 D) 20+
- Degree of education (completed) A) BA B) MA C) PhD
- Degree of education (ongoing) A) None B) MA C) PhD

APPENDIX-E: Metacognitive Awareness Inventory

Metacognitive awareness inventory[6]								
This is a questionnaire aimed to determine the degree of your metacognitive awareness based on different aspects of metacognition. Please check the best option for you from 1=*Strongly Disagree* to 7= *Strongly Agree*		Strongly Disagree						Strongly Agree
1	I ask myself periodically if I am meeting my goals.	1	2	3	4	5	6	7
2	I consider several alternatives to a problem before I answer.	1	2	3	4	5	6	7
3	I try to use strategies that have worked in the past.	1	2	3	4	5	6	7
4	I pace myself while learning in order to have enough time.	1	2	3	4	5	6	7
5	I understand my intellectual strengths and weaknesses.	1	2	3	4	5	6	7
6	I think about what I really need to learn before I begin a task.	1	2	3	4	5	6	7
7	I know how well I did once I finish a test.	1	2	3	4	5	6	7
8	I set specific goals before I begin a task.	1	2	3	4	5	6	7
9	I slow down when I encounter important information.	1	2	3	4	5	6	7
10	I know what kind of information is most important to learn.	1	2	3	4	5	6	7
11	I ask myself if I have considered all options when solving a problem.	1	2	3	4	5	6	7
12	I am good at organizing information.	1	2	3	4	5	6	7
13	I consciously focus my attention on important information.	1	2	3	4	5	6	7
14	I have a specific purpose for each strategy I use.	1	2	3	4	5	6	7
15	I learn best when I know something about the topic.	1	2	3	4	5	6	7
16	I know what the teacher expects me to learn.	1	2	3	4	5	6	7
17	I am good at remembering information.	1	2	3	4	5	6	7
18	I use different learning strategies depending on the situation.	1	2	3	4	5	6	7
19	I ask myself if there was an easier way to do things after I finish a task.	1	2	3	4	5	6	7
20	I have control over how well I learn.	1	2	3	4	5	6	7
21	I periodically review to help me understand important relationships.	1	2	3	4	5	6	7
22	I ask myself questions about the material before I begin.	1	2	3	4	5	6	7
23	I think of several ways to solve a problem and choose the best one.	1	2	3	4	5	6	7
24	I summarize what I've learned after I finish.	1	2	3	4	5	6	7
25	I ask others for help when I don't understand something.	1	2	3	4	5	6	7
26	I can motivate myself to learn when I need to.	1	2	3	4	5	6	7
27	I am aware of what strategies I use when I study.	1	2	3	4	5	6	7
28	I find myself analyzing the usefulness of strategies while I study.	1	2	3	4	5	6	7

[6] Schraw, G. & Dennison, R.S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology,* 19, 460-475.

		Strongly disagree						Strongly agree
29	I use my intellectual strengths to compensate for my weaknesses.	1	2	3	4	5	6	7
30	I focus on the meaning and significance of new information.	1	2	3	4	5	6	7
31	I create my own examples to make information more meaningful.	1	2	3	4	5	6	7
32	I am a good judge of how well I understand something.	1	2	3	4	5	6	7
33	I find myself using helpful learning strategies automatically.	1	2	3	4	5	6	7
34	I find myself pausing regularly to check my comprehension.	1	2	3	4	5	6	7
35	I know when each strategy I use will be most effective.	1	2	3	4	5	6	7
36	I ask myself how well I accomplish my goals once I'm finished.	1	2	3	4	5	6	7
37	I draw pictures or diagrams to help me understand while learning.	1	2	3	4	5	6	7
38	I ask myself if I have considered all options after I solve a problem.	1	2	3	4	5	6	7
39	I try to translate new information into my own words.	1	2	3	4	5	6	7
40	I change strategies when I fail to understand.	1	2	3	4	5	6	7
41	I use the organizational structure of the text to help me learn.	1	2	3	4	5	6	7
42	I read instructions carefully before I begin a task.	1	2	3	4	5	6	7
43	I ask myself if what I'm reading is related to what I already know.	1	2	3	4	5	6	7
44	I reevaluate my assumptions when I get confused.	1	2	3	4	5	6	7
45	I organize my time to best accomplish my goals.	1	2	3	4	5	6	7
46	I learn more when I am interested in the topic.	1	2	3	4	5	6	7
47	I try to break studying down into smaller steps.	1	2	3	4	5	6	7
48	I focus on overall meaning rather than specifics.	1	2	3	4	5	6	7
49	I ask myself questions about how well I am doing while I am learning something new.	1	2	3	4	5	6	7
50	I ask myself if I learned as much as I could have once I finish a task.	1	2	3	4	5	6	7
51	I stop and go back over new information that is not clear.	1	2	3	4	5	6	7
52	I stop and reread when I get confused.	1	2	3	4	5	6	7

APPENDIX-F: Transcript of a Sample Interview (Pre-service Teachers)

1. What do you think about your capabilities in planning, teaching, assessment and professional development? Do you think you are effective in them? If yes, what are your strengths? If no, what areas do you need to develop?

PT 4-male/ GPA; 1.5-2.99

This academic term, we have school experience course and I realize that I am not efficacious in many areas such as lesson planning or classroom management, and I definitely need to improve myself. It is an inhibiting factor for us to take school experience course in the last year, so we have many concerns. For example, I am worried about how to deal with disruptive behaviors in the classroom. I wish we had this course before. Therefore, I could reflect on my experience and improve myself during my training years, and I could have a chance to consult to my teachers and get feedback from them on the areas to improve.

I know I need to improve myself in teaching young learners. Well, anyway, theoretical courses were so effective at our school. Our university is a great university. I am aware of my strengths in theoretical knowledge, but not in classroom practices. In assessment, I realized my weaknesses and I know I need to get teaching practices to improve it. As for professional development, I plan to keep a journal about my teaching experience.

2. Do you think there could be factors affecting your efficacy beliefs such as work load, stress and learner motivation in your future teaching practice?

I think work load could be a positive factor affecting my efficacy, because I like working a lot and spending most of my time by teaching children. I think only school setting could affect me negatively; my communication with administration or my colleagues.

3. **Do you think you can make use of cognitive skills such as planning, checking comprehension while learning something?**

I do not think that I use any strategies while learning. I just read between lines to learn anything. For example, I just read a text to learn vocabulary. I do not do more.

4. Do you think you will be able to make use of these skills in your teaching?

I have plans about my teaching practices, even I dream about that. Well, I think I could make use of strategies in my teaching.

APPENDIX-G. Transcript of a Sample Interview (In-service Teachers)

1. What do you think about your capabilities in planning, teaching, assessment and professional development? Do you think you are effective in them? If yes, what are your strengths? If no, what areas do you need to develop?

(T2- female/ 15 years of experience/ PhD.)

I think I am efficacious in lesson planning and teaching practices, but I am trying to do my best to improve myself with the awareness that a teacher always has something to learn from others. My strengths are planning lessons well and being able to be flexible and implement B plans when necessary while teaching. Like all teachers, I think I should spend more time and effort on my professional development because depending on new technologies and trends, one can and should improve his/her skills at any time. As for assessment, I do not do much because I do not have to do that as there are other teachers who work for assessment issues in my institution. I can only evaluate my students through the activities in the classroom and plan my lessons accordingly.

2. Do you think there are factors affecting your efficacy beliefs such as work load, stress and learner motivation?

Of course. I think that the most important factor that affects a teacher's efficacy in the teaching process is his or her students. Students' readiness, motivation, willingness to learn, and sometimes even interaction with each other can affect the classroom environment. I teach my students at most 3 courses per week in my institution. Therefore, I often cannot meet the requirements for effective language teaching. Especially for speaking activities, students' motivation is quite low and we do not have enough time. Considering all of these, I don't think I can fully reflect my efficacy in the classroom.

3. **Do you think you can make use of cognitive skills such as planning, checking comprehension while learning something?**

I'm always willing to learn something new. I always follow the innovations especially for my professional development and do my best to improve myself. I think that I have sufficient knowledge and cognitive skills in this sense since I think that I can learn everything I want to learn easily.

4. Do you think you can make use of these skills in your teaching?

Unfortunately, no. I cannot transfer all of the skills I have into classroom practices. Lack of class hours, the curriculum we have to cover and the physical conditions of the classrooms are the factors that hinder me. I'm especially interested in technological applications and I try to improve myself in them, but I can't implement most of the new things I've learned in my classes. In fact, some students in classes have enough motivation on these issues, but physical conditions always prevent me from implementing them. In this case, I can only let my students know about those applications and guide them to use them.