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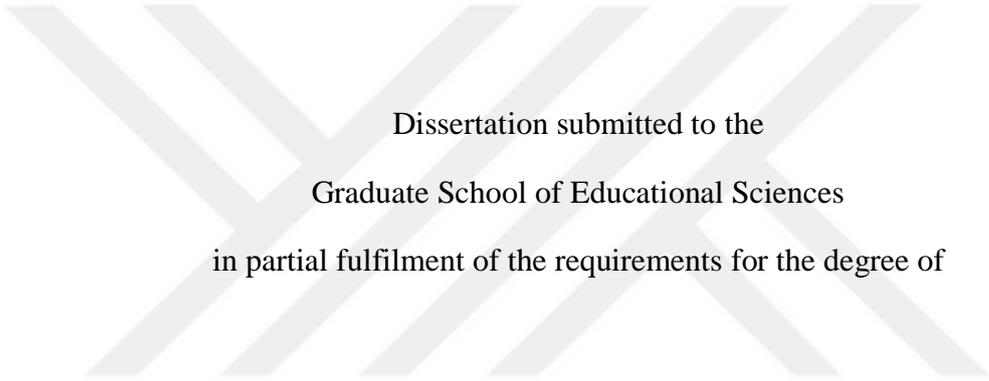
DEPARTMENT OF ENGLISH LANGUAGE EDUCATION

POSSIBLE EFFECTS OF EMPLOYING VIDEO RECORDING AS A SELF-MONITORING TOOL ON PRE-SERVICE EFL TEACHERS' REFLECTIVITY AND TEACHING KNOWLEDGE

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2018

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Dissertation submitted to the
Graduate School of Educational Sciences
in partial fulfilment of the requirements for the degree of

Doctor of Philosophy

in

English Language Education

by

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YEDİTEPE UNIVERSITY

2018

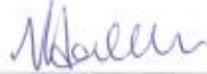


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ACKNOWLEDGEMENTS

It is my pleasure to thank all the people involved in this long and exhausting journey. Without their help, continuous support, and inspiration, it would have been impossible to successfully accomplish the mission.

Primarily, I am thankful to my supervisor Prof. Dr. İsmail Hakkı Erten for his constant supervision, great inspiration, positive energy, and constructive feedback in this long ride. I am deeply indebted to him whom I have earned a lot both as a supervisor and as a friend since the starting point of my academic career.

I would like to extend my appreciation to Prof. Dr. Ayşe Semra Akyel for her continued belief in me and academic support since the beginning of my PhD studies at Yeditepe University. Her incisive and constructive feedback at each step of the study assist the maturation of my ideas and contribute a lot to the entire process.

I am sincerely grateful to the committee members, Dr. Hossein Farhady, Dr. Evrim Eveyik Aydın and Dr. Orhan Kocaman for their invaluable guidance and assistance which enable to form the final borders and shape of the study. I would also like to express my gratitude to Dr. Zeynep Koçoğlu for her academic and administrative provision.

My deepest appreciation goes to the participants of the study. Their enthusiasm and willingness to be a part of the study made this exciting journey possible.

My most heartfelt of thanks go to my parents and my sister who always provided me constant love, great encouragement, and continued support.

Beyond all, I owe a lot to my family, particularly to my wife Burcu Özdemir Beceren and my son Arel Sarp Beceren whose unswerving heartfelt support and understanding in this tortuous journey gave me strength and courage when I lost my inspiration. I promise that I will compensate all the days and nights that I spent away from them.





to my son, AREL SARP BECEREN,

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ABSTRACT

Possible Effects of Employing Video Recording as a Self-Monitoring Tool on Pre-Service EFL Teachers' Reflectivity and Teaching Knowledge

Sedat BECEREN

The overall aim of the research study is to explore the potential effects of training and implementing video recording and analysis on pre-service teachers' professional development as a self-monitoring tool in an ELT pre-service teacher education context in Turkey. More specifically, the study seeks to observe any promising changes in pre-service EFL teachers' reflectivity levels and their competencies in terms of their knowledge regarding lesson planning, selection and make use of language teaching resources, teachers' language use in the classroom and classroom management.

In this sense, a convergent parallel design in which the effect of this activity was assessed with a control group was employed to address the purpose of this study. Therefore, both quantitative and qualitative data were gathered concurrently, and the results were collated to provide a stronger baseline. The study was conducted in an ELT department at a state university located in the northwest of Turkey with thirty senior pre-service EFL teachers who were selected by the random sampling strategy. Fifteen of them were assigned to the study group and the other fifteen were allocated to the control group. Having been trained about the usage of video recording and analysis as a self-monitoring tool for a semester, participants in the study group employed this activity in their teaching practice course while the control group followed the routine requirements of the teaching practice course. Data collection was performed in the following academic semester employing quantitative and qualitative

research instruments. For collection of quantitative data, The Profile of The Reflective Thinking Attributes Instrument developed by Taggart and Wilson (1998) and The Teaching Knowledge Test (Cambridge ESOL) were employed as a pre-test and post-test design to both groups. Video recordings of school lessons, video-stimulated recall sessions, and written reflections based on those sessions were employed to gather the qualitative data from participants in the study group. Analysis of the quantitative data was made using IBM SPSS Statistics 21 programme and the qualitative data were analysed by the software MAXQDA 12.

Results regarding a shift in the reflectivity levels indicated that the participants in the study group enhanced their reflectivity level more than the control group. Overall qualitative findings of the study supported the quantitative findings as there was a hierarchical improvement in pre-service EFL teachers' reflectivity level throughout the study. The study concluded that majority of the participants reached the highest level of reflectivity due to the implementation of video based self-monitoring activity. In addition, individual analysis of qualitative data revealed that some of the participants exploited more from the procedure to improve their reflectivity level. Results regarding teacher knowledge growth as a consequence of self-monitoring usage divulged that video recording and analysis as a self-monitoring tool is a highly effective activity for enhancing teachers' knowledge growth, particularly about planning and preparing a lesson, its flow, selecting and utilising language teaching resources and materials, teachers' language use in the classroom and managing the teaching learning process. In other words, the use of video as a self-monitoring tool can be considered as a powerful instrument to support the professional development of pre-service teachers. The study provides several implications for teacher educators, university supervisors and particularly for teacher

education programmes whose aim is to prepare pre-service teachers for the real teaching profession by training them using professional development tools.

Key Words: Video self-monitoring, reflection, reflectivity level, teaching practice, teacher knowledge, pre-service teachers, professional development.



KISA ÖZET

Video Kayıtlarının Bir Öz-Denetim Aracı Olarak Kullanılmasının Hizmet Öncesi İngilizce Öğretmen Adaylarının Yansıtıcı Düşünme ve Öğretmenlik Bilgisi Üzerine Olası Etkileri

Sedat BECEREN

Bu çalışmanın amacı, bir öz-denetim aracı olarak video kayıt ve analiz yönteminin öğretilmesinin ve uygulanmasının Türkiye’de eğitim alan İngilizce öğretmen adaylarının mesleki gelişimine olan etkisini incelemektir. Daha spesifik olarak ele almak gerekirse, bu çalışmada öz-denetim aracı olarak video kayıtlarının kullanılmasının öğretmen adaylarının yansıtıcı düşünme seviyelerinde ve ders planlama becerileri, ders materyali ve kaynak seçme becerileri, ders esnasında kullandıkları hedef dili kullanma becerileri ve sınıf yönetimi becerileri üzerine umut vaat eden bir etkinin olup olmadığını araştırmaktadır.

Bu bağlamda, çalışmanın amacına uygun olarak bu aracın etkisini bir kontrol grubu ile karşılaştırmaya imkân tanıyan yakınsayan paralel desen araştırma yöntemi olarak kullanılmıştır. Bu yüzden hem nitel hem nicel araştırma verileri eş zamanlı olarak toplanmış ve her iki veri grubunun birbirini destekleyerek sonuçlarda kullanılması, çalışmanın sonuçlarını daha güçlü bir hale getirmiştir. Çalışma Türkiye’nin kuzeybatısında bulunan bir devlet üniversitenin İngiliz Dili Eğitimi alanında öğrenim gören ve rasgele örnekleme metodu ile seçilen 30 son sınıf öğrencisi ile gerçekleştirilmiştir. Bu öğrencilerden on beşi tanesi çalışma grubuna, diğer on beşi ise kontrol grubuna atanmıştır. Çalışma grubunda yer alan katılımcılar, bir akademik dönem boyunca öz-denetim aracı olarak video kayıt ve analiz yöntemi üzerine eğitim aldıktan sonra, izleyen dönem programında yer alan öğretmenlik uygulaması dersinde

bu aktiviteyi uygularken, kontrol grubunda yer alan katılımcılar sadece dersin gerektirdiği yükümlülükleri yerine getirmişlerdir. Araştırmanın verileri bu ders kapsamında bir akademik dönemde nitel ve nicel veri toplama araçları ile toplanmıştır. Nicel veriler, Taggart ve Wilson (1998) tarafından geliştirilen yansıtıcı düşünmeyi ölçen bir enstrüman ve Cambridge Üniversitesi tarafından geliştirilen Öğretmenlik Bilgisi Testinin ön-test son-test olarak iki gruba da uygulanması ile toplanmıştır. Nitel veriler ise, video kayıtları, video kayıtlarına dayalı anımsama ve yazılı görüşler aracılığıyla toplanmıştır. Toplanan nicel verilerin analizinde IBM SPSS Statistics 21 programı, nitel verilerin analizinde ise MAXQDA 12 analiz programı kullanılmıştır.

Yansıtıcı düşünme seviyesindeki değişikliklere ilişkin sonuçlara göre, çalışma grubundaki öğretmen adaylarının yansıma düzeylerinin, kontrol grubundakilere oranla daha fazla artmış olduğu sonucuna ulaşılmıştır. Bu bulgu, nitel verilerin analizinden elde edilen bulgularla da desteklenmiştir. Çalışmanın sonunda katılımcıların büyük bir çoğunluğunun en üst düzey yansıma seviyesine çıktığı sonucuna ulaşılmıştır. Nitel verilerin bireysel düzeyde incelenmesi, bu artışın öğrenciler arasında eşit olarak dağılmadığını ve bazı öğrencilerin bu süreçten daha fazla faydalandığını ortaya koymuştur. Öz-denetim aracı olarak video kayıt ve analiz yönteminin öğretmen adaylarının öğretmenlik bilgisi üzerine etkisine ilişkin sonuçlar ise, bu uygulamanın öğretmenlik bilgisini, özellikle ders planı hazırlama ve ders akışını kontrol etme, öğretim materyali ve kaynağı seçebilme, öğretmenlerin sınıf içi dil kullanma ve sınıf yönetimi becerilerinin geliştirilmesinde oldukça etkili bir yöntem olduğunu ortaya koymuştur. Bir başka deyişle ile, video öz-denetim aracının kullanımı öğretmen adaylarının mesleki gelişimine önemli katkı saylayan bir yöntem olduğu sonucuna ulaşılmıştır. Çalışmanın bulguları, öğretmen eğitimcilerine, öğretmenlik uygulaması

dersi y6neticilerine ve 6zellikle amacı 6đretmen adaylarını ger6ek hayata hazırlama olan 6đretmen eđitimi veren programlara katkı sađlayacak 6neriler sunmuřtur.

Anahtar Kelimeler: Video 6z-denetim, yansıma, yansıma d6zeyleri, 6đretmenlik uygulaması, 6đretmenlik bilgisi, 6đretmen adayları, mesleki geliřim



CHAPTER 1

INTRODUCTION

1.1. Background to the Study

Due to advances in technology, globalisation, international competition, and economic growth, the world of tomorrow expects students to have overly complex skills to meet the standards of the new world. The success of students is the outcome of teacher quality, experience, and expertise. Since teachers are the most important agents who will shape future generations, teacher education programmes have been searching for innovative ways to support teacher quality and improve their experience and expertise. This endeavour is called teacher professional development. In today's world, teachers need professional development more than ever to update and improve their skills to fulfil the rising demands of society (Craft, 2000). In the literature, there has been a considerable interest in research on professional development; however, the term has been defined in different forms. In her 10-year review on teachers' professional development, Avalos (2011, p.10) stated that the common ground of these studies was about "teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students' growth" and these studies asserted that "teacher professional learning is a complex process, which requires cognitive and emotional involvement of teachers individually and collectively".

This new comprehension on teachers' professional growth has given rise to the augmentation of a new perception on professional development of teachers in which teacher learning is considered as a long-term and bottom-up process. Accordingly, traditional INSET programmes which are short-term and top-down fade away as they do not create any opportunity for the active learning of teachers (Harris, et al., 2012;

Ball & Forzani, 2009; Borko, 2004). Therefore, a shift in professional teacher development programmes has been recognised, moving away from the top-down approach to an individually and interactively-initiated bottom-up approach.

This new concept of teacher professional development is defined as a lifelong learning procedure that is complex, prolonged, and highly individual without an alpha and omega. In this process, teachers are considered as autonomous learners responsible for their lifelong learning process. That is to say, they should decide on their needs for professional development and they should initiate and sustain the process of professional growth in this teacher-led, bottom-up teacher development.

However, individually initiating and sustaining the professional growth of teachers is a problematic issue as they should be aware of what needs should be developed; needs which alter according to the individual, classroom setting, school structure, society, and culture. In some cases, professional growth may be associated with experience, and it is believed that through experience teachers can raise their awareness and gain expertise in teaching. Nonetheless, teaching is a profession that cannot be developed only by experience. Farrell (2015, p. 1) stated that “we do not learn much from experience alone as much as we learn from reflecting on that experience”. Moreover, Dewey (1933, cited in Farrell, 2015) proposed that teachers avoiding reflection on their actions could become slaves to their routines.

With the inefficiency of traditional professional development models and pure experience in raising inquiry-oriented teachers who can critically think about their actions, reflective thinking has started to be utilised as the new model of teachers’ professional development, which can transform teachers into a continuous researcher of their own instructional decisions.

"Reflection", "reflective thinking", or "reflective practice", are not updated terms and they have been extensively researched in the field of education since the term "reflection" was first introduced by Dewey in the early twentieth century. In his work "How we think", Dewey, (1933) introduced reflection as a necessary action for better practice and a method for problem solving. He also highlighted that effective reflection could only be provided by self-awareness. After a certain silent period, Schön (1987) revived the concept and associated the term particularly with education. Since then, many prominent researchers and educators have attempted to expand Dewey and Schön's conceptions of reflection. Some focused on the type of the reflection, some pinpointed the necessary level of reflection for a change in one's actions, and some concentrated on methods or strategies that trigger reflection. The results of these studies revealed that reflective practice was an essential implement for the professional development of teachers as it promotes teachers' repertoire of knowledge by constantly constructing and re-constructing their instructional decisions, which yield to a more efficient teaching environment and the success of students. There have been several attempts to build a framework for reflective teacher education programmes, but there has not been a complete agreement on the legitimate components and efforts to provide more efficient and effective tools for reflective practice; therefore, the term is still in the research stage.

The use of self-initiated and self-evaluated activities such as diary keeping, journal writing, action research, and self-monitoring are accepted as effective techniques for reflecting on any teaching performance individually. With the recent advancement in video technology, video recording and analysis as a self-monitoring tool has started to be utilised as a reflective practice activity for teacher professional development. The related literature proposes that video-aided reflection can enhance

teachers professionally (Berliner, 1988; Dreyfus, 2004, Haw & Hadfield, 2011) as it can be used as a mirror in which teachers can easily watch their classroom actions from various angles. Therefore, the study addresses the practice of this "mirror" as a reflective tool to promote teachers' reflectivity level and their knowledge growth.

1.2. Statement of the Problem

Much has been printed and discussed about the use of reflection, reflective thinking, and reflective practice in teacher education context and the term is accepted as a transformational tool for teachers' professional development. Nevertheless, there is no consensus on the conditions that support reflective practice or the activity types / strategies / tools that enhance the reflectivity level and professional growth of teachers.

A combination of video and reflection as a self-monitoring tool is an activity that has gained popularity recently due to technological innovations and it is acknowledged to be a practical solution for bridging the gap between theory and practice (Rich & Hannafin 2009; Whitehead & Fitzgerald 2007; Christ, Arya & Chiu, 2017). There has been a widespread curiosity in video use in all teacher education contexts with a particular focus on all subject areas all around the world. Similar to other reflective practice applications, there are various dimensions of video use, such as video self-reflections, video case studies, video clubs, video editing tools, and video reflection with peers, which can differ according to the focus of the studies. Therefore, the literature fails to propose a framework that can fit any educational setting and further research is required for a better comprehension of the effect of video usage and its analysis as a self-initiated reflective process on teachers' professional development.

Reflective practice is extensively accepted as a trigger for the growth of teaching expertise. In particular, pre-service teachers should be exposed to video-based reflective activities in order to reach the desired level of teaching expertise in a short time. However, the link between the ability to self-reflect and the development of teaching expertise among pre-service teachers has not been empirically studied in the literature. Particularly in the Turkish teacher education context, video-based self-reflection or video self-monitoring studies are scarce, as it may not be considered as a necessary component of pre-service teacher education. More importantly, in the Turkish context, to the best of researcher's knowledge, no study focuses on teacher transformation in terms of their knowledge growth (which is measured with a standardised test) and reflectivity growth as an experimental way in which teachers' reflection with video and without video is compared.

1.3. Purpose of the Study

The central goal of reflective teacher education programmes is to train skilful pre-service teachers equipped with several reflective abilities as these skills can help them survive in the challenging context of the teaching profession. When pre-service teachers graduate, they become novice teachers and most of them feel alone, isolated, or helpless at the beginning of their career as they cannot find enough support in their professional growth and some of them quit the profession or burn out in a short time. Novice teachers need support particularly in terms of lesson planning, delivery of their plans, and classroom management. The ability to retrospectively analyse and reason through their actions can be a survival tool for novice teachers. Therefore, this ability should be taught in teacher education programmes.

This ability is directly associated with reflective practice and it can be trained and developed in various forms. One of them is video based self-monitoring. In the present study, pre-service EFL teachers were trained how to employ and benefit from this activity. The prime objective of the study was to explore the potential effects of training and implementing video recording and analysis as a self-monitoring tool for pre-service teachers' professional development in a pre-service EFL teacher education context in Turkey. Focusing on this aim, the study particularly seeks to observe any promising changes in pre-service teachers' reflectivity levels and their performance regarding planning a lesson, selecting and utilising resources and materials, teachers' language use in the classroom and handling the teaching and learning process. Therefore, the study endeavoured to answer the subsequent research questions.

1. Does the implementation of video based self-monitoring have an effect on the reflectivity level of pre-service EFL teachers?

2. Does the use of video based self-monitoring have an effect on the competencies of pre-service EFL teachers in terms of their knowledge on the following concepts:

- a) Planning and preparing a lesson
- b) Selecting and utilising language teaching resources and materials
- c) Teachers' language use in the classroom
- d) Classroom management

If so... How?

1.4. Significance of the Study

In the recent literature, there has been a noteworthy attention in teacher learning and teachers as they are the initial actors of a community's transformation. Since traditional professional development methods lose their impact on teachers' progress, teacher education programmes have been searching for innovative methods to make pre-service teachers competent in their career. Therefore, the terminology of reflection, reflective practice and reflective thinking has been introduced into the teacher education field as an innovative way of initiating and sustaining the professional growth of teachers.

Following Dewey's definition of reflection as a holistic method for analysing, assessing actions by considering them in reverse, and reaching possible deductions, other researchers such as Schön, Valli, and van Manen have expanded his views and the term has become an invaluable tool for teachers' professional development. Almost all teacher education programmes have set reflective practice as a foundation goal and they pursue activities or strategies which can support the process of reflective growth as it enables teachers, particularly pre-service teachers, to reach a certain level of expertise.

Video recording and analysis as a self-monitoring tool is one those activities that can be used in promoting teachers' professional growth. It can be initiated and sustained by the teachers themselves without requiring any other scaffolding. Therefore, it can be a remedial measure to fill the gap between pre-service education programmes and in-service teacher development (Farrell, 2012). It is emphasised in the literature that novice teachers frequently encounter a lot of difficulties in the initial years of their career and they need support in order to survive in this overly complex

profession. However, there is no specifically designed course for fostering reflective practice in teacher education programmes in Turkey. The practicum or teaching practice sessions are the most appropriate phases for gaining this experience by pre-service teachers, in which they can reflect and develop their routines for better teaching actions. This period can be considered as a transitional zone for pre-service teachers as they prepare lesson plans and teaching materials, implement them in a real classroom setting, and receive feedback from their mentors and supervisors. However, the feedback that they receive from their supervisor is assessment-focused, the pre-service teachers cannot feel relaxed, and they do not focus on the learning process but simply concentrate on just their teaching. The training and implementation of video recording and analysis as a self-monitoring activity can empower them by recognising their strengths and weaknesses and improve their existing knowledge, skills, and own language skills. Therefore, the present study is significant since it presents a way of how one can analyse one's own teaching performance without fear of assessment and how to make deductions from the lived experience of reflection. Secondly, the results of the study contribute to the literature in terms of how video self-reflection may influence pre-service teachers' reflectivity levels and their knowledge growth, in other words, their professional development. Furthermore, since to the best of my knowledge, there have been no efforts to compare the effect of video recording and analysis as a self-monitoring tool with a control group, particularly in the Turkish context, the present study may guide teacher educators in Turkey on using this tool as a common framework for fostering the professional development of language teachers. Finally, the outcomes of the study may provide grounds for further study on the impact of video recording and analysis as a self-monitoring tool and implications for the field of language teacher education in Turkey.

1.5. Limitations of the Study

Due to the complexity of the present study's focus, which is reflection, teacher learning, and teacher knowledge growth, it would be helpful to highlight the limitations of the study.

First, the study was carried out with pre-service EFL teachers, studying in an ELT department, at a state university located in the northwest of Turkey. Though the study is assumed to contribute to the pre-service EFL teacher education literature, the results cannot be generalised to all language-teaching contexts.

Second, as the purpose of the study was to investigate the effect of video recording and analysis as a self-monitoring tool on the reflectivity level of pre-service teachers after they had training and engaged in this process, other factors which might influence any shift in the reflectivity level of the participants were not taken into consideration for research purposes.

In addition, it would be remarkable to consider that it is quite difficult to assess reflectivity shift in teacher education context as the reflectivity level of the pre-service teachers enhance due to several factors such as background, learning in other lessons, learning from their peers, the classroom environment at the practicum school or even the attitude of their mentor. These can be considered as confounding factors which might particularly influence quantitative findings of the study. Furthermore, more reflective activities can be provided to the control group to assess the influence of self-monitoring in the form of video recording and analysis.

Third, as the concept of teacher knowledge is extraordinarily complex in its nature, only some aspects such as “planning and preparing a lesson”, “selecting and

utilising language teaching resources and materials”, “teachers’ language use in the classroom”, and “classroom management” are focused on in this study. The growth of teacher knowledge is assessed by the Teaching Knowledge Test, which is a standardized test developed by the University of Cambridge ESOL Examinations Board (Cambridge ESOL). Similar to reflectivity, teacher knowledge can also be easily affected by other factors such as background of preservice teachers, context of study and pedagogic knowledge, content knowledge, and pedagogic content knowledge. Therefore, these factors were not taken in to consideration.

Fourth, the sample size of the study and control groups is limited due the implementation of video recording and analysis procedures. It may be considered as a limitation of the generalisability of the research findings.

Fifth, the duration of the study can be considered as a limitation as the concept of reflectivity and teacher knowledge can be improved in a slow manner in their nature.

Overall, although there are some limitations of the study and the findings cannot be generalised to all language teacher education settings, the procedures followed for the implementation of video recording and analysis as a self-monitoring activity and discussion of the findings may help shed light for further video-based self-reflection studies in other teacher education programmes.

1.6. Definitions of Key Terms

It is essential to outline the terminology used in the study to fully comprehend the purpose of it. The followings are functional definitions of the terms mentioned in the study.

Professional Teacher Development: This is a complex, prolonged, and highly individual process rather than an end product in which teachers pursue understand of the teaching job and themselves as teachers by considering the personal, moral and value dimensions of teaching.

Reflection, reflective practice, or reflective teaching: In educational settings, this refers to “the process of making informed and logical decisions on educational matters, then assessing the consequences of those decisions.” (Taggart & Wilson, 2005, p.1).

For the purposes of this study, reflection is used to describe both the anticipatory and retrospective reflections of a pre-service teacher's teaching actions. Those reflections created in this study are based on a video recording of their teaching performance in narrative form.

Levels of Reflection: In this study, Taggart and Wilson’s (1998) reflective thinking pyramid, which consists of three levels, is employed to assess the reflectivity level of the participants. These levels are: technical, contextual, and dialectical. The categorisation of the reflections in this study was determined by analysis of written reflection based on video analysis.

Self-monitoring: In the teacher development context, this is a reflective activity in which teachers investigate their current actions, knowledge, skills, and attitudes. They use the gained experience for self-appraisal. It can be actualised in three ways. The first one is lesson reports which is based on the notes taken at the end of the lesson, the next one is audio recording of the lesson which depends on audio recording of the lesson, and the last one is video recording of the lesson which is based on video record of the lesson (Richards & Farrell, 2005).

Video recording and analysis as a self-monitoring tool: This is one of the procedures that can be followed for the implementation of self-monitoring. Video provides a mirror to observe one's own classroom practices by focusing not only on their own actions but also the entire teaching process. In this study, video recording and analysis as a self-monitoring tool is employed in the form of recording pre-service EFL teachers' teaching performances and then reflecting on them by watching themselves.

Pre-service teacher: In the context of this study, pre-service teachers are senior students in the process of attaining their initial teaching credential. They are required to enrol in school experience sessions and teach practice courses in which they can have their first hands-on experience in real classroom settings.

1.7. Organization of the Chapters

The dissertation is organized in five chapters. The present chapter initially provides an outline of the study's background and then introduces some main concepts of the study with reference to a problem statement detailing its purpose, significance, and limitations. It further provides some key definitions which clarify the purpose of the research and concludes with the organisation of the dissertation. The second chapter focuses on the main body of the related literature regarding the components of the study. This part begins with the broad concept of teachers' professional development and then narrows down to the individually-initiated reflective activity of video analysis as a self-monitoring tool by focusing on its importance, value, and effectiveness. The next chapter reports the methodology employed in the study. A detailed explanation of the research design and methods employed to reach the goals of the study are provided and the procedure is discussed

regarding the setting of the study, participants involved in the study, data collection, and data analysis. The fourth chapter states the findings of the qualitative and quantitative analysis with reference to the research questions. The last chapter is the discussion and conclusion part followed by implications and recommendations for further research. At the end of the dissertation, references and appendices are provided.



CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

The purpose of this chapter is to present a review of related literature about the research topics delimited by the research questions. As the focus of the study is the transformation process of teachers, it first starts with the umbrella term of professional teacher development and language teacher professional development and then it focuses on the place and role of reflection in this process. The chapter continues with reflective practice activities that are used for the professional development of teachers. In particular, the video self-monitoring activity is discussed by stating its pros and cons for teacher professional development and previous research studies are presented in relation to the purpose of this study.

2.2. Teacher Professional Development

Ever since teaching was accepted as a profession, there has been a widespread interest in improving the quality of the teaching profession; predominantly focusing on teachers' knowledge, competence, skills, and effectiveness. Like other occupations, teachers are also offered programmes in which they can update their professional knowledge. These are called Professional Development programmes. In general, the term refers to having a variety of educational experience related to teaching. In the literature, teachers' professional development has been extensively investigated but defined and described in diverse ways. No matter how it is defined and described, the focus and interpretation of the term is related with "teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students' growth." (Avalos, 2011, p. 10).

Although the nature of professional development is elusive and there are many working definitions for it, traditionally it refers to actions that take place in in-service education, such as professional meetings and workshops. These events are extremely popular and numerous teachers around the world benefit from these activities; however, these are mostly in the form of “sit and get sessions” in which teachers are provided with stimulating innovative ideas and practical suggestions by an outside expert in the field (Wang, 2009). In other words, it is a kind of conceptual knowledge transmission, which is not directly related to teachers’ individual needs and context. Moreover, there has been increasing dissatisfaction with this type of teacher professional development at international level where teachers are assumed to be able to grasp the information provided and apply it directly in their classroom settings. Borko (2004, p. 4) openly described the existing programmes as “woefully inadequate”. It was gradually realised that this type of professional development has almost little or no effect on teachers' actual behaviour in classrooms since learning to teach is considered to be a lifelong process (Guskey, 1999; Villegas-Reimers, 2003; Borko, 2004; Lieberman & Pointer Mace, 2008; Atay, 2008; Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009; Wang, 2009, Avalos, 2011; Muijs et al. 2014; and Borg, 2015). Furthermore, Borg (2015) mentioned that externally-driven professional development actions which accepted the teacher as a consumer could also have some disadvantages. According to him, teachers might conclude that their knowledge and experience is worthless by believing external knowledge is more important. They therefore become dependent on external authorities.

The realisation of traditional professional development programmes’ inadequacy changes the concept of teacher professional development into a life-long process. In this process, teachers are transformed by actively participating in

individual and collaborative practices in contexts related to learning and teaching. Richards and Farrell (2005) defined this process as a long-term goal for teachers in which they attempted to comprehend the nature of teaching profession and of course themselves as teachers. In other words, it is a complex, prolonged, and highly individual process that has no alpha and omega. For instance, a student, as a pre-service teacher, is involved in professional development by following an academic course. A trainee teacher is committed to professional development by entering his/her first lesson, or an in-service teacher is involved in this process by participating in a workshop, or an experienced teacher is drawn to professional development by trying to comprehend and solve a classroom problem. As is clear from the examples provided above, it is not a single event but a process, and the strategies and activities related to it should be taught from scratch to ensure the long-term development of teachers.

Villegas-Reimers, (2003) proposed that this new perception of teacher professional development had several characteristics which differentiate it from conventional professional development programmes. The shift in teacher professional development programmes is shown in Table 2.1 below.

Table 2.1.

Shift in Teacher Professional Development Programmes (adapted from Villegas-Reimers, 2003)

Conventional TPDP	New Perspective of TPDP
<ul style="list-style-type: none"> • Transmission-oriented • Teachers as consumers • Short Term Process 	<ul style="list-style-type: none"> Based on Constructivism Teachers as active learners Long-term Process

• Not related with actual classroom experience	A process which happens within a particular context
• Not linked to school reform	Closely linked to school reform
• Teachers as consumers	Teachers as reflective practitioner
• Individual	Collaborative process
• one-size-fits-all event	Different in diverse settings

As can be understood from the distinctions stated in the table above, the new conception of teachers' professional growth is a lifetime learning progression in which teachers are active participants as reflective practitioners in their professional growth.

Such a shift or difference can also be observed in the goals of teacher education. There have been two extensive aims acknowledged in teacher education literature. These are: teacher training and teacher development. The initial aim usually refers to actions that concentrate on teachers' responsibilities. It is short-term, but it has immediate objectives. It is driven by the outer authorities and it covers functional but important theoretical approaches and methods and how they can be put into practice. Some of the objectives of this orientation are stated by Richards and Farrell (2005, p.4) as "learning how to use effective strategies to open a lesson, "adapting the textbook to match the class", and "using effective questioning techniques". From another perspective, Merhbi (2012) addressed the term as top-down professional development that is designed, developed, assisted, and driven by schools. This perception of professional development, often accepted as Top-Down Professional Development, is generally characterized as formal and external.

In contrast to the first objective, that of teacher training, which aims at fostering teacher actions on particular issues, the second objective - teacher

development - focuses on teachers' growth in all dimensions. It has the broader aim of enabling teachers to be life-long learners. Therefore, it is long-term, and it can be acknowledged to be a "bottom-up approach", in which teachers are in charge of initiating and sustaining their personal and professional development. As it is driven by teachers, the schools' role and responsibility is lesser. Teachers decide on their needs and search for new ways of improving their classroom practices.

In a broad sense, professional development in the teacher education context can be referred to as a formal or informal activity, approach, tactic, or curriculum whose main purpose is to influence and change teachers' beliefs, attitudes, knowledge, skills, and practices to improve students' achievement (Guskey, 2002). This development can be guided inside a training programme such as pre-service or initial teacher education or it can be conducted by teachers as self-directed professional development.

Pre-service or initial teacher education programmes provide guidance to learners as teachers about possible pedagogic choices, subject-matter knowledge, teaching strategies, L2 designs, classroom management, understanding the curriculum and course materials. Pre-service teachers advance their knowledge about teaching through these courses; however, not everything that they need to know can be offered at the pre-service or initial teacher education level as the knowledge related with teaching constantly changes (Richards & Farrell 2005). Therefore, a professional development approach should be placed into pre-service or initial teacher education programmes to raise their awareness of the issues regarding teachers' professional development before they start their career (Mann, 2005). In this way, teacher education can have a long-term positive effect and aid novice teachers through their first-years in occupation. Therefore, it could be considered as a necessary duty for all

educational institutions to supply opportunities for professional development activities for the benefit of pre-service teachers (Zeichner & Noffke, 2001).

In addition to the opportunities provided by educational institutions, personal commitment is also crucial in the long-term effect of these programmes. Roberts (1998) claimed that self-involvement in activities such as reflection, self-monitoring, and self-appraisal was the only way to achieve continuous professional development. He furthermore stated that these kinds of self-initiated activities were essential conditions for the transformation of teachers in the long run. Therefore, teacher education programmes are responsible for serving a collection of tools, activities, strategies, and practices which support pre-service teachers' personal commitment to their professional growth (Mann, 2005).

In the history of teaching, numerous acts and events have been carried out to enhance the quality of education but there are numerous variables affecting the teaching process. Teachers may not be the first variable needing to be changed in the process, but they are the most important agents of change, who influence the entire teaching process. Therefore, teachers' professional development is indispensable. Guskey (1999) highlighted the necessity of teachers' professional development by asserting, "Notable improvements in education almost never take place in the absence of professional development" (p. 4).

2.2.1. Language teacher professional development

Teaching, particularly language teaching; is a field facing rapid changes due to educational reforms, changes in curriculum, requirements of national / international tests, technological advances, and the need to improve students' performance.

Language teachers are the actors who are influenced most by this change as they need

to catch up with the latest developments in the field. Therefore, both language teacher education programmes and language teachers individually must transform their routines and experiences.

Given the recent transformation of the professional development programmes stated above, there has been an international attention in approaches to the professional development of language teachers. In her ten-year review of teachers' professional development, Avalos (2011) concluded that the traditional in-service training model for teacher development was over and the term must now recognise that "teacher learning and professional development is a complex process that brings together a host of different elements and is marked by an equally important set of factors" (p. 17). A supportive contribution to her thoughts was mentioned by Mann (2005). In his state of the art article on language teacher professional development, Mann (2005, p.105) proposed several guidelines for effective professional development; incorporating teacher knowledge, reflection, and collaboration. In his words, the term of language teacher development:

- is a bottom–up process and as such can be contrasted with top–down staff development programmes;
- values the insider view rather than the outsider view;
- is independent of the organisation but often functions more successfully with its support and recognition;
- is a continuing process and can never be finished;
- is a process of articulating an inner world of conscious choices made in response to the outer world of the teaching context;
- is wider than professional development and includes personal, moral and value dimensions;
- can be encouraged and integrated in both training and education programmes.

(Mann, 2005, p.105)

As it is obvious from the features listed above, language teacher professional development is no longer a top-down process and it values the teachers' opinions and adds personal, moral and value dimensions. It gives foremost importance to teachers' learning, which transforms over time.

Even though there are no universal templates for the success of these programmes, Borg (2015, p.5) mentioned that professional development programmes ought to have the following features.

- relevance to the needs of teachers and their students
- teacher involvement in decisions about content and process
- teacher collaboration
- support from the school leadership
- exploration and reflection with attention to both practices and beliefs
- internal and/or external support for teachers (e.g. through mentoring)
- job-embeddedness (i.e. Continuous Professional Development is situated in schools and classrooms)
- contextual alignment (with reference to the institutional, educational, social, and cultural milieu)
- critical engagement with received knowledge
- a valuing of teachers' experience and knowledge

(Borg, 2015, p.5)

These features are in parallel with the recent approach of language teacher professional development. It is an ongoing, long-term, and collaborative process in which teachers are knowledge generators rather than knowledge consumers (Borg, 2015). In addition to the self-engagement of teachers in the development of their own profession, the context, culture, and institution should also support it. With these features, a professional development programme aims to raise language teachers' ability to reflect on their actions, change their actions in classrooms based on their

reflections, continuously follow their development as teachers, and share and exchange ideas with other teachers and administrators.

2.2.2. Teacher learning and language teacher development

Teacher learning is causally related with teachers' professional development as most of the professional development programmes aim to enhance teachers' competencies. In fact, there is a cause and effect relationship between teacher learning and teacher development. Most of the TPDPs have been designed around the question of how teachers learn and change (Avalos, 2011). However, the term "teacher learning" is complex and hard to define simply. Being a complex system, it has been referred to as "a wicked problem" (Briggs, 2007, Bore & Wright, 2009) which cannot be defined by accumulation and generalities, since the nature of the learning is based on "the uniqueness of the context, person, and so on" (Opfer & Pedder, 2011, p.379).

Although it has been considered as a composite social phenomenon, Richards and Farrell (2005) proposed four conceptualisations of teacher learning. These are "skill learning", "cognitive process", "personal construction" and "reflective practice" (pp. 6-7). The first is "teacher learning as skill learning". This learning approach is grounded in a positivist paradigm and has been employed in the history of language teacher education. In this approach, teacher learning is considered as the development of various skills and competencies such as presenting new language, practicing, questioning, etc.

The second is "Teacher learning as a cognitive process". The positivistic conceptualisation of teacher learning is shifted to the cognitive approach, which focuses on teacher cognition. Borg asserted that (2003, cited in Richards and Farrell 2005, p. 6) "teachers are active, thinking decision-makers who make instructional

choices by drawing on complex practically-oriented, personalized, and context-sensitive networks of knowledge, thoughts, and beliefs”. Teacher learning is perceived as a dialogic learning process of co-constructing knowledge (Johnson, 2009).

The third is “Teacher learning as personal construction”. In this approach, it is believed that teachers do not just receive knowledge passively, but they actively construct and reconstruct the knowledge unless it fits into their personal framework. In other words, through reconstruction, knowledge is internalized by the teachers (Roberts, 1998). In this approach, teachers should be assisted to foster their self-awareness, and how they interpret their own personal knowledge.

The fourth and most recent one is “Teacher learning as reflective practice”. In this conceptualisation of teacher learning, it is assumed that teachers can build up their knowledge by reflecting on their own actions and this reflection is characterised by the critical investigation of one’s ideas and experiences about teaching.

Farrell (2015) concluded that all these conceptualisations should consider teachers' existing beliefs, experiences, and skills to be successful. Among these four conceptualisations, the latest one, the reflective approach, has been accepted as the current and leading paradigm in teacher education (Farrell, 2007; Barkhuizen & Borg, 2010; Johnson & Golombek, 2011; Borg, 2011) and the present study also focuses on this conceptualisation of teacher learning.

2.2.3. Teacher change - from novice to expert teachers

Another factor related with language teachers’ professional growth is their expertise in language teaching. Much of the research on teacher expertise has been

grounded in studies on expertise in other fields. However, identifying this aspect in teaching is much more difficult than identifying it in other fields, since “the act of teaching is a situated activity” which can change due to different contexts and cultures (Tsui, 2005, p. 169). Therefore, there is no objective template which fits all conditions. The question of what makes someone an expert teacher is mostly examined through the distinction between novice and experienced teachers. In this vein, the notion of expertise is frequently characterised by years of experience.

In the educational literature, there is no complete agreement on the time spent to become an expert teacher, but many research studies suggest that it can take three to five years (Tsui, 2005; Farrell, 2012). In this perspective, teaching expertise is considered as a superior state to be reached after certain years and practice and it is characterised by “efficiency, automatic responses, effortlessness, and fluidity” (Tsui, 2009 p. 422). Most of studies have stated the difference between novice and expert teachers according to years of experience by comparing the teachers’ cognitive change in the different steps of teaching, such as the pre-active planning phase, the interactive classroom implementation phase, and the post-active reflection phase (Tsui, 2005). Furthermore, the author (as cited in Richards and Farrell (2005, p. 8) defined the characteristics that expert teachers have as follows:

- A richer and more elaborate knowledge base
- Ability to integrate and use different kinds of knowledge
- Ability to make sound intuitive judgments based on experience
- A desire to investigate and solve a wide range of teaching problems
- A deeper understanding of students and student learning
- Awareness of instructional objectives to support teaching
- Better understanding and use of language learning strategies
- Greater awareness of the learning context

- Greater fluidity and automaticity in teaching

(Richards & Farrell, 2005, p.8)

According to these specifications, expert teachers are those experienced enough to easily develop automaticity and routines to overcome anticipated problems or achieve the goals of education. However, experience does not always guarantee being successful or being expert in teaching, even if it is considered as a paramount factor in being an expert in any field. The notion of experience leading to expertise in teaching has also been criticized in the relevant literature in that it cannot be considered the only criterion of becoming an expert (Farrell, 2014; Tsui, 2003).

Apart from the mere time spent on teaching which leads to expertise, it is how this time is spent, how this experience is gained and how it is codified and retrieved that is more important in becoming expert in teaching. Change can only be possible or more effective if the teacher purposely practices and continues looking for new ways to improve himself/herself rather than just relying on their routines and minimising opportunities for change. Ericsson (2006, p. 683) alleged that “some types of experience, such as merely executing proficiently during routine work, may not lead to further improvement, and that further improvements depend on deliberate efforts to change particular aspects of performance”. Therefore, the conceptualisation of expertise is not a state to be reached but is an ongoing process in which the teacher always pursues ways of self-improvement and reconstruction of their existing knowledge. This type of expertise requires teachers to be critical thinkers and reflective practitioners as they can improve their skills and knowledge, which are essential for self-directed development (Brandt, 2008, Farrell 2013). The strategies for self-directed development should be introduced from scratch to teachers, and opportunities should be created to pursue their own development and change.

Therefore, pre-service teachers should be taught ways of improving themselves as teachers in order to be experts in the journey of teaching. Although the teaching profession is conducted in a community with students, learning how to teach and improving one's self in his/her profession is in fact a highly individual process. In the literature, it is mentioned that there is gap between pre-service teacher education programmes and in-service teacher development (Farrell, 2015; Tarone & Allwright, 2005). Farrell (2015) suggested two practical solutions for teacher education programmes, which are the main organisations responsible for bridging this gap. The first is that teacher education programmes should associate all teacher preparation courses with real teaching situations by creating strong links and offering pre-service teachers reflective practice opportunities throughout their education phase. They can therefore continue their development in their first years of teaching. The second is more specific, which suggests adding an additional course titled "Teaching in the First Years" in which pre-service teachers develop the skills of anticipatory reflection. In this course, pre-service teachers are engaged in reflective activities in which they explore and analyse their beliefs and practices, and this would promote their ability to reflect on their actions.

Even though there are various ways of fostering teacher change leading to expertise, Farrell (2015) suggested that engaging reflective practice in teacher education programmes allows an easy transition from teacher education programmes to the early years of teaching. In addition, Schritesser (2013, p. 7) recommended that pre-service teachers would be instructed about the importance of motivation to change in order to develop their professional competencies. The key is "explicit will" to look for new ways of improving one's competences for the development of expertise and professionalism.

As can be clearly understood from the last paragraphs of the preceding sections, reflection, reflective practice, or reflective teaching is the most effective key to teachers' transformation from novice to expert in the field (Schön, 1987, Van Manen, 1999, Ferraro, 2000, Farrell, 2015).

2.3. Reflection as a Concept

Reflection, reflective practice, or reflective teaching are not revised terms; however, they have become highly popular in teaching recently and numerous research studies have been carried on the effect of reflective practices and the outcomes (Rodgers, 2002; Darling-Hammond, 2006; Craig, 2010; Lyngsnes, 2012). Moreover, it became a concept that governs the teacher education world and the terms “*reflection, reflective practice, or reflective teaching*” become almost obligatory expressions mentioned in any language teacher education and professional development programme (Farrell, 2012). Even though it has been highly popular in the education field and a substantial number of educators assist the concept that reflection is a profitable skill for teacher development, there is still no harmony on what reflection, reflective thinking, reflective practice or reflective teaching are and the type of reflective practices that promote teacher professional development (Farrell, 2007, 2012).

Although the term is elusively defined in the literature, it was first coined by American philosopher and educator John Dewey in 1910. Over a century ago, Dewey introduced the idea of reflective thinking in his ground-breaking book “How we think”. In this book, reflective thought was described as “active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and further conclusions to which it tends” (Dewey, 1910, p.

6). In his definition of thought, he made a distinction between beliefs accepted with support or without support. He referred to reflective thought as a procedure where “the ground or basis for a belief is deliberately sought and its adequacy to support the belief examined” (Dewey, 1910, p. 2). In other words, it is a process of critical exploration of the context related with reflection. In any reflective action, Dewey pinpointed two sub-processes. The first is the state of bafflement, confusion, and incomprehension where one can be puzzled due to a new situation and the other is regarded as the next step, in which one starts investigating any additional facts to corroborate or nullify a suggested belief. Thus, he asserted that efforts in solving a perplexity were the leading factors in the entire process of reflection.

In his work, he contrasted routine actions guided by tradition, custom, and authority with reflective action guided by constant self-appraisal and development. In his definition, it was proposed that this intentional and deliberate thought is a way of escaping from “purely impulsive or purely routine action” (p. 14). He proposed that this kind of thinking could truly be heuristic. He suggested that teachers should break their chains in following routines and let themselves be free to make informed decisions about their practices. To breaking out of a routine, he stressed that one should be actively and deliberately engaged with problematic issues by considering his/her experiences.

In addition to efforts guiding the reflective process, Dewey (1933) also introduced some qualities or attitudes which could be considered as other possible keys to the growth of a reflective practitioner. These are the concepts of open-mindedness, responsibility, and wholeheartedness. In other words, these are necessary attitudes for cultivating reflective actions.

Open-mindedness is described as the attitude of paying attention to more than one side of any argument without being prejudiced or partisan, considering any issue from different angles, showing an interest in facts, and knowing that even our true beliefs could be questioned. Responsibility refers to the attitude of considering the actions that one has done and their consequences to oneself and others. In short, it is the ability to judge the impact of our behaviours. The last attitude, wholeheartedness, refers to the attitude of putting Dewey's concepts of open-mindedness and responsibility in the centre of one's professional life and devoting oneself to actions related to one's profession, regardless of any personal cost.

Dewey suggested that one of the primary goals of education was to assist students in attaining reflection as a habit where the mind is trained, and then it is possible to engage in thinking more intelligently, which could result in escaping from routine. From another perspective, Dewey's definition of reflection could be regarded as a way of escaping from routine behaviour to freedom, which he defined thus:

Reflection emancipates us from merely impulsive and merely routine activity, it enables us to direct our activities with foresight and to plan according to ends-in-view or purposes of which we are aware, to act in deliberate and intentional fashion, to know what we are about when we act (Dewey, 1933, p. 17).

Since then, many researchers have been inspired by Dewey's conceptualisation of reflection and introduced various definitions of the term by expanding on Dewey's writings.

For example, Boud, Keogh, and Walker (1985) approached the term from the perspective of the learner and defined it as "A generic term for those intellectual and

affective activities in which individuals engage to explore their experiences to lead to a new understanding and appreciation” (p. 3). What they added to Dewey’s concept was the emotional side of the learner and they further referred to the term as “an important human activity in which people recapture their experience, think about it, mull over and evaluate it (p. 43). In addition, they also developed a cyclical model of reflective thought titled in terms of experience, reflection, and outcome.

Another cornerstone in the field of reflective practice is Donald Schön (1983) whose work entitled “*The Reflective Practitioner: How Professionals Think in Action*” broke fresh ground in the field. In his dissertation, he studied Dewey’s theory of inquiry and expanded Dewey’s ideas about reflection and inspired professionals in many fields, particularly in teaching. In fact, Schön’s works (1983 & 1987) might be considered as the most influential in education, teacher education and particularly teachers’ professional development as he focused on the role of tacit knowledge, experience and reflective practice, which leads to expertise in the profession.

Schön (1983) criticised the usefulness of traditional approaches to knowledge building or formalized learning in terms of narrowing the gap between theory and practice. He proposed that the existing epistemology of practice should be modified to include “artistic, intuitive processes which some practitioners do bring to situations of uncertainty, instability, uniqueness and value conflict” (p. 49).

He asserted that the difference between actions carried out by skilled professionals and the less skilled was based on the skilled practitioners’ tacit knowledge, which assisted their behaviour in a creative and artistic way. Through reflective practices, they are able to shape and reshape their tacit knowledge. The process can be exemplified as the difference between novice and expert teacher in

educational settings where a skilled or expert teacher will act like an actor on the stage.

2.3.1. Types of reflection

Schön (1983, 1987) was the first researcher to make a distinction between types of reflection. He proposed that professionals could employ two different reflection types in order to clarify and improve their actions. These are “reflection in-action” and reflection-on-action”. This distinction is based on the time when someone reflects on their actions. The former refers to reflections during the action itself and the latter is reflection taking place after the event. Reflection in-action is partly an unconscious action made as a result of an unexpected, surprising, or confusing situation based on professional knowledge, while reflection-on-action is deliberate and purposeful activity conducted regarding a completed action. Reflection-on-action gives us the opportunity to review our actions and improve our teaching routines. Schön (1983, p.26) clarified the discrepancy between these two terms thus: “We reflect on action, thinking back on what we have done in order to discover how our knowing-in-action may have contributed to an unexpected outcome.” With the help of reflection-on-action, a reflective practitioner can scrutinize his/her previous classroom behaviour, recognise his /her personal strengths and weaknesses, and look for alternative ways to reach better outcomes. S/he can discuss the situation with colleagues and reshape their knowledge, which leads to professional development.

Reflection-in-action, on the other hand, is an active or interactive process which one employs to modify their actions concurrently (Hatton & Smith, 1995). Farrell (2012, p.12) defined this process as “how teachers think on their feet” when they instantly react to actions. However, he suggested that this type of reflection did

not happen automatically. One should be aware of the theories-in-use, or in Donald Schön's words, we must be acquainted with "knowing-in-action" where we continuously reframe our knowledge about teaching. Reynolds (2011) further added that if this reflection does not transform into actions in one's future, it cannot be considered as reflective practice.

Following Dewey's and Schön's classification of reflection, Van Manen (1991) proposed another type of reflection. It is reflection-for-action. He suggested that teachers not only reflected on incidents at the time of teaching or after their teaching, but they also looked for any anticipated problems that they could come across in their future career. Killion and Todnem (1991) asserted that both reflection-on-action and reflection in-action were responsive to a stimulus whereas reflection-for-action was neither for reviewing our experiences nor for engaging the cognitive process. They defined the term as considering future teaching with the purpose of personal guidance for our future career. That is why it is also called "anticipatory reflection" in the literature.

Farrell (2012) added that the first two types of reflection "in and on" could lead educators to perform another type of reflection, which is reflection-for-action. What he deduced from Dewey's and Schön's works is that "reflective teaching is evidence-based" (p. 14) and this evidence is grounded in teachers' experiences where they continuously question their past, present and future actions. In this manner, teachers are aware of their teaching knowledge and can easily define "what they do, how they do it, and why they do it" and the outcomes of their action (p. 14).

Another reflective type is reflection-with-action, which was introduced by Ghaye (2011). He asserted that reflection could be done alone or with others.

Regarding this type, he explained the difference between thinking and acting alone and or thinking and acting in a group.

The following figure outlines the most common reflective types mentioned in the literature.

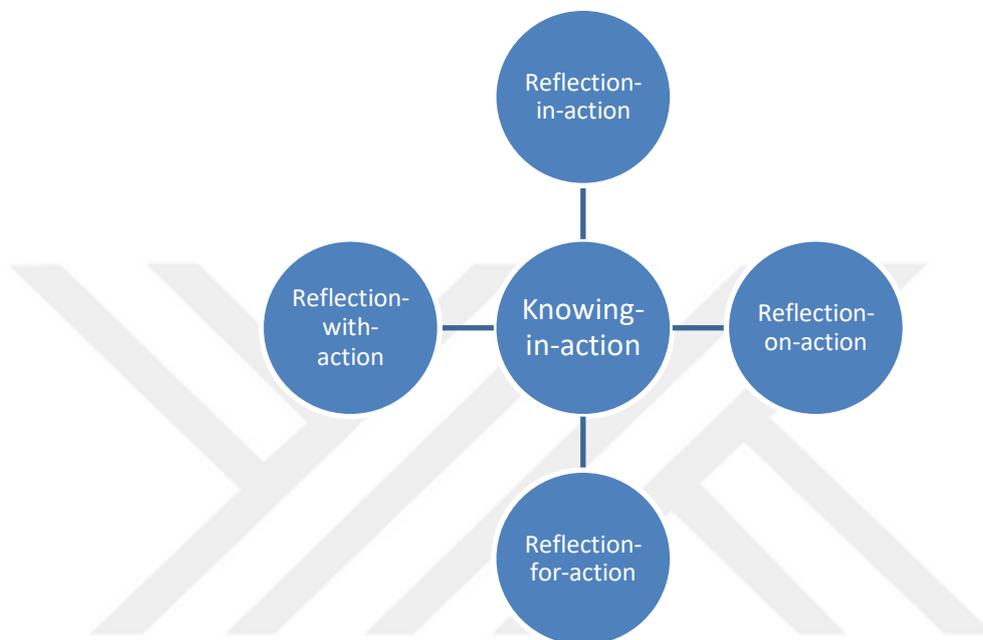


Figure 2.1: Types of reflective practice

2.3.2. Levels of reflective practice and its measurement

Due to its popularity in the field of education, reflection, reflective practice, or reflective teaching have all been investigated in their various dimensions. The term is referred to as a gradual and simultaneous process carrying a novice teacher to the expert level. As discussed in the “Teacher change-from novice to expert teachers” section above, the transformation of teachers takes time in which they gain expertise and experience. With the help of this expertise and experience, the focus of their reflection also changes. The shift in reflection’s focus can be considered as the level of reflection.

Several researchers have attempted to delineate the levels of reflection. Van Manen's work on the definition of reflectivity levels could be considered the first study in the field (Moon, 2006). Van Manen (1977) claimed that reflection, reflective thinking, and reflective practice were hierarchical and sequential, and he offered three levels of reflection.

Level 1: Technical rationality

Level 2: Practical action

Level 3: Critical reflection

The first level, technical rationality, “refers to the technical application of educational knowledge and of basic curriculum principles for the purpose of attaining a given end” (Van Manen, 1977, p. 226). In other words, anyone reflecting at this level focuses on the moment, his/her behaviours, actions, or skills by considering them as isolated events and they do not pay attention to the other stakeholders of the teaching profession such as classroom context, school, and community. It can be interpreted that most of the beginner teachers' reflection is at this level due to the lack of necessary schemata about challenging events.

The second level, practical action, “refers to the process of analysing and clarifying individual and cultural experiences, meanings, perceptions, assumptions, prejudgments, and presuppositions, for the purpose of orienting practical actions” (Van Manen, 1977, p. 226). In this level, teachers start to see a wider picture of the teaching profession and they analyse their own and their students' actions to comprehend the nature of educational experience. In other words, they begin to

inquire about their practices in the light of their increasing pedagogical knowledge and they initiate the transformation process by connecting theory and practice.

The third level, critical reflection, considers “the question of the worth of knowledge and the nature of the social conditions necessary for raising the question of worthwhileness” and “involves a constant critique of domination, of institutions, and of repressive forms of authority” (Van Manen, 1977, p. 227). Particularly, they begin to consider the broad picture in which they place emphasis on moral and ethical matters such as equality, social justice, and the ethic of care.

Valli (1992), another notable author in the field, elaborated on Manens’ framework and she introduced a new classification of reflectivity levels which comprised five levels. Her classification of reflection is “technical reflection, reflection-in-action and reflection-on-action, deliberative reflection, personalistic reflection, and critical reflection”. She contributed to Van Manen’s hierarchical conception of reflection in which the previous item in her classification is a prerequisite for the following item.

The first level, technical reflection, is almost identical to Van Manen’s classification of technical rationality. At this level, teachers focus on their teaching performance by considering the criteria determined externally which are set as the result of research studies about good teaching and they try to reflect on their teaching as to whether they reach the pre-established criteria of good teaching. The next level, reflection-in-action and reflection-on-action is borrowed from Schön’s work. Valli (1997) stated that this level valued teachers’ inner voice as an expert teacher, unlike technical reflection. In other words, knowledge of the craft is considered as a base line for valuing reflection and teachers' ability to judge their own classroom actions and

ability to draw conclusions. The third level, deliberative reflection, can be defined as a combination of the first two levels. In other words, the teachers' decision-making process is "based on a variety of sources: research, experience, the advice of teachers, personal beliefs and values and so forth" (p. 77). At this level, teachers listen to both their inner voice and outside voice, such as in research results, and how other teachers come to a conclusion over the best practices. The fourth level, personalistic reflection, is related with personal growth and other related issues. These provide the source of reflection. In this level, teachers should consciously try to link their person lives and professional lives. At this level, teachers could attempt to create empathy with their students. They not only think about their academic achievement, but they also pay attention to their students' lives in all dimensions. Valli (1997) explained that "Teachers reflecting in a personalistic way would be caretakers, not just information dispensers" and "the quality of their reflection would be determined by the ability to empathize" (p. 78). The last level, critical reflection, is the highest and deepest one which regards reflection as a political construction. At this level, teachers are supposed to reflect on any incidents that alter their way of teaching and school structures which could wipe injustice and inequalities away.

Another definition for reflection levels is defined by Hatton and Smith (1995). They developed Van Manen's categorisation. Their definition is based on pre-service teachers' self-comments on their practices through writing. They introduced four levels which have a hierarchical order. The first level, descriptive writing, merely contains descriptions and reports of events. In other words, there is no discussion beyond description. The second one, descriptive reflection, shows an increased awareness of events. The practitioner expresses some reasons or justifications for the events that are being reported. However, there is no tangible evidence that these

reasons or justifications lead to transformation of practices. The third level, dialogic reflection, refers to taking a step back from the real classroom events. The practitioner can explore alternatives to their own perspective and explore events in a discussion with themselves. In the fourth level, critical reflection, the practitioner not only explores the events but is also able to consider the events from a wide angle involving factual and socio-political frameworks. Hatton and Smith (1995) claimed that all four levels served as a bridge to pre-service teachers to fill the gap between theory and practice.

In addition to the levels of reflection described below, several other protocols and frameworks have been developed and employed to assess reflectivity levels (for more information, see the table provided by Lee, 2005, p. 702). Even though there are differences between these protocols and frameworks regarding their focus or their hierarchical nature, most of the literature agrees on three levels of reflection (Farrel, 2004; Larrivee, 2008; Lee, 2005; Taggart & Wilson, 2005; Mann & Walsh, 2017). These levels are practical/technical, contextual/deliberative, and critical/dialectical. The initial level, practical/technical, is largely about practice of specific actions, skills and issues and mostly organised in the form of description of observation. The contextual/deliberative reflection level focuses on rationale, justification, and evaluation. In this level teachers mostly investigate their actions within the scope of context. The highest level, critical/dialectical, considers linking classroom practices to the broadest concepts of education such as moral, social, ethical and political issues. At this level educators transform their actions and practices by reconstructing their beliefs and experience.

In the literature related to the assessment of reflective practice, most of these three levels have been used to develop assessment tools for reflectivity levels.

Although there is a consensus on the levels of reflective practice, Kember, Leung, Jones and Loke (2000) asserted that “there is a scarcity of readily-usable instruments to determine the reflectivity levels” (p. 381) and mostly qualitative methods, including analysis of written and spoken reflections, have been employed. The reason of why there are not readily available quantitative instruments to appraise the levels of reflection might be the complexity of the reflective practice’s definition or there is no agreement on a single description of the term (Rodgers, 2002)

In line with the proposed categories of reflection level, Taggart and Wilson (1998) introduced the reflective thinking pyramid (see figure, 3.3) which consists of three levels. These levels are technical, contextual, and dialectical. This categorisation was implemented for the objectives of study and the Profile of Reflective Thinking Attributes developed by Taggart and Wilson (1998) was employed to evaluate the reflection level of teachers. Comprehensive information about the levels and the instrument is presented in chapter 3.

2.4. Reflective Practice and Language Teacher Development

Due to the conceptual shift in the teacher development paradigm, researchers have sought to find ways of improving teachers’ development which yield to positive outcomes in both student achievement and teacher change and effectiveness and teaching quality. Reflection, reflective practice, or reflective teaching is the result of that inquiry.

Since it was first introduced by Dewey over a century ago, the term reflective practice has been under investigation in both pre-service and in-service educational settings to develop a framework which defines its breadth and depth. In the literature, there is agreement that reflective practice is a valuable instrument for the professional

growth of teachers. However, there is no consensus on what it really refers to and what kind of reflective activity truly fosters the professional development of teachers (Rodgers, 2002; Glazer, Abbott, & Harris, 2004; Farrell, 2007, 2012).

Reflective practice is a process which assists teachers in checking their existing knowledge and how to filter it and improve it. In this process, teachers should think and rethink their actions and frame their existing knowledge. However, the process is difficult, as it requires some competencies such as critical thinking, self-directed learning, creative problem-solving and decision-making ability accompanied with necessary professional knowledge and self-awareness (Lee, 2007). In the educational perspective, the term is defined as “making informed and logical decisions on educational matters, then assessing the consequences of those decisions” (Taggart & Wilson, 2005, p. 1). Therefore, teacher education programmes attempt to educate prospective teachers as reflective practitioners by employing various approaches that promote reflective practice in teacher education settings. It is somewhat accepted as a tool for bridging theory and practice, particularly for prospective teachers who have difficulty in doing this. Loughran (2002) added that through reflection, teachers could be assisted in recognising what they know and how they acted in classrooms and they could find a way of developing new perspectives about teaching.

In the literature of reflective teaching in pre-service education, there are numerous studies and their focus ranges from the roles of teacher educators, arguments for reflection, ways to develop reflection, levels of reflective practices, and the use of reflection to link theory and practice. Prospective teachers are required to do assignments that require reflection, such as keeping journals, portfolios, action research, and online discussions.

Ur (1996) defined reflective practise as a survival practice for pre-service teachers particularly in their early career years and she concluded that it could be a preventative instrument for the teacher burnout issue. Johnson et al. (2014, p. 531) described the early career years of teachers as “transition traumas” in which pre-service teachers graduate and start teaching. They often feel alone and are always looking for someone scaffolding them.

Therefore, starting reflection at the pre-service level can allow prospective teachers to make associations between their preconceived knowledge and reality in the classrooms.

On the other hand, reflective practice efforts for practising teachers are coupled with professional development activities (Moss, Springer, & Dehr, 2008). There is a direct association between reflective practice and teacher change and, of course, this can lead to student success as an outcome. In addition, Roberts, Crawford, and Hickmann (2010) asserted that reflective practice could be considered as a launching point for in-service teachers which shapes their professional development. Furthermore, some major national organisations in the USA such as the Council of Chief State School Officers (2011), National Board of Professional Teaching Standards (2002), and National Staff Development Council (2011) recommended the use of reflective practice as a standard in their programmes. Some independent teacher education institutions in the USA have also required the use of reflective evaluation tools in the assessment of practising teachers (Ohio Department of Education, & Ohio Educator Standards Board, 2007; Responsive Classroom, 2012; Wisconsin Department of Education, 2013).

Even though the teaching profession is socially framed, it is primarily shaped by individual acts. Farrell (2008) highlighted the importance of reflection as it leads to self-awareness. Beijaard, Meijer and Verloop (2004) indicated that for teachers “it is impossible to speak about the ‘self’ when there is no reflection” (p. 114). Furthermore, Farrell (2008) concluded that self-reflection was a key factor for bridging their practices with their attitudes, knowledge, and feelings.

For a definition of reflective practice, Farrell (2012) used a metaphor. He defined it “as a compass” which showed teachers the right way when they needed to find their directions. He further claimed that the metaphor of a compass could empower teachers to be aware of where they were and showed where they wanted to go in the future (p. 7). However, both pre-service or in-service teachers should be aware of how they use this compass for their professional development. Therefore, teacher education programmes should guide these prospective teachers on how to use reflective practice as a compass apart from merely teaching specific content knowledge, pedagogical principles, and practical skills; then they can employ them in their future career. To this end, pre-service teachers should be familiarised with teacher-driven approaches which assist their future teaching careers.

2.5. Professional Development Strategies

Professional development strategies for teachers are generally described as the documentation of several teaching practices which involve reflective inquiry of their actions, attitudes, beliefs, interactions and other collaboration activities. Teachers can initiate and make use of these strategies by themselves or educational institutions can provide them to teachers. The use of these strategies depends on the personal needs of the teachers or the needs of the educational institution.

It is generally the teachers' responsibility to engage in professional development activity. In this sense, teachers assist themselves in learning how to teach. It can be regarded as self-directed learning, referring to a form of self-teaching (Knowles, Swanson, & Holton, 2005). Therefore, teachers as learners should be equipped with the essential skills and strategies for teaching. The first step in initiating professional development activity is awareness of its need. Therefore, teachers should first be aware of their need for professional development. In other words, they should have the desire to learn more about their profession and set some specific short-term goals about their needs.

For the realisation of their needs, teachers constantly should analyse their teaching acts by reviewing their previous actions and they should compare and contrast them with their present acts and alter their teaching acts due to their own and their students' needs. In this way, they update their existing teaching knowledge, competencies, and behaviours, which can be regarded as a self-reflective process that leads to their professional development. The use of this process requires teachers to use several self-directed strategies (Head & Taylor, 1997).

Once teachers are aware of themselves and employ such activities, their transformation from novice to expert is inevitable. However, there are various activities that teachers can utilise for their transformation. Some of them can be self-initiated, some can be employed with a peer, and others require collaborative group activities. Richards and Farrell (2005) categorized these activities into four classes regarding with whom they could be carried out. These are: individual activities, one-to-one activities, group-based activities, and institutional activities.

Table 2.2.

Activities for Teacher Development by Richards and Farrell (2005 p.14)

Individual	One-to-one	Group-based	Institutional
Self-monitoring	Peer Coaching	Case studies	Workshops
Journal Writing	Peer Observation	Action Research	Action Research
Critical Incidents	Critical Friendship	Journal Writing	Teacher Support
Teaching portfolios	Action Research	Teacher Support	Groups
Action Research	Critical Incidents	Groups	
	Team teaching		

The activities in the first column are self-directed and they can be used by any kind of teacher (pre-service, novice, or expert) depending on their needs. Individual efforts to improve one's teaching are the starting point of transforming from novice to expert teacher. These are the easiest and cheapest means but powerful tools to improve teachers' professional knowledge and these self-directed developmental activities allow teachers to become reflective practitioners. As this study attempts to explore the influence of self-monitoring activity on pre-service teachers' reflectivity and knowledge growth, among these 17 teacher development activities it is necessary to define and discuss one of them, selected for the purpose of this study, in detail.

2.5.1. Self-monitoring

Richards and Farrell (2005) proposed that teachers' awareness about their current knowledge, skills, and attitudes and utilising this awareness for their self-evaluation could be the initial stage for professional development of teachers.

Therefore, self-monitoring is a way of actualising self-assessment.

Armstrong and Frith (1984, cited in Richards, 1990) defined the term as "a systematic approach to the observation, evaluation and management of one's own behaviour, for the purpose of understanding and gaining control over one's behaviour" (p. 118). In fact, it is employed by everyone in his or her daily lives to

improve themselves. In this way, we are transformed, and we develop new routines for our forthcoming life.

In the teacher professional development context, self-monitoring is a reflective activity which provide an opportunity to teachers that they can investigate their classroom acts to better comprehend their way of teaching and their strengths and weaknesses in teaching. Through the self-monitoring process, teachers can notice their current knowledge, skills, behaviours, attitudes and conceptions and this awareness allows them to criticise their former actions and decisions and take necessary precautions for their future practices.

There are several advantages of self-monitoring mentioned in the literature. First, it provides objective explanation or feedback about one's teaching life. In real teaching time, we may think that everything is great as we focus on reaching our objectives of fulfilling the lesson plan and we feel that we do our best. However, Richards and Farrell (2005) highlighted that once teachers had the opportunity of watching their own performances, most of them were generally amazed and even astonished as to what they had thought and what they did in reality. Some samples of this mismatch can be exemplified as giving confusing instructions, ambiguous explanations, speedy speech, inattentive students, teacher talking time, and overuse of some distractive words such as Uh-Aaa, Yes or Good. Therefore, self-monitoring can assist teachers to bridge the gap between their self-perceptions about their teaching and the reality.

Another benefit of using self-monitoring is that it creates a venue for critical reflection; which is considered necessary for teachers' professional development. Through self-monitoring, they conduct self-inquiry, and they are involved in

reflective teaching that changes their behaviours initially welded from their intuitions to a stage where their acts are controlled by reflection.

Other advantage is the shift of responsibility for launching a professional development programme from an outsider perspective to the teachers themselves. As change commences from the self, teachers no longer wait for a remindful poke to improve themselves. In terms of human nature, it is most uncomfortable and sometimes intimidating to be observed by someone else; therefore, teachers can feel relaxed and joyful when they self-observe their actions with a critical eye. Even if it is not necessary, they can voluntarily share and discuss their ideas with their colleagues or administrators to receive feedback. In this way, teachers can attain a level of enlightenment about their teaching knowledge, competencies, behaviours, and practices which contribute to their professional development.

Furthermore, it provides data for teachers not only about themselves but also about their students, classroom, and course materials, which can help to shape their future acts. It serves teachers as a revelation which enables the teacher to recognise the difficulties students have, and their improvement, as well as his/her own strengths and weaknesses.

Among other professional development activities mentioned in Table 2.2, self-monitoring is cheap and easy to use, but it is a pragmatic way of engaging in professional development as it provides invaluable information about the teachers, students, classroom environment and teaching practices that can be utilised later by employing other activities or strategies such as peer observation, action research, or team teaching (Merhbi, 2012). At first, teachers might be doubtful about the advantages of self-monitoring, but they are convinced about its impact after they

employ it one or two times. Every teacher should utilise self-monitoring process at least once or twice at each academic year or when they start teaching particularly a new student group.

2.5.2. Procedures used in self-monitoring

The self-monitoring activity can be implemented in three diverse ways. Richards and Farrell (2005) entitled them as: keeping lesson reports, audio recording of the lesson, and making a video recording of the lesson.

2.5.3. Lesson reports

Richards and Lockhart (1996, p. 9) defined this procedure as “the structured inventory or list which enables teachers to describe their recollections of the primary features of a lesson”. Particularly, it is the reverse procedure of writing a lesson plan as it is done shortly after the completion of the lesson. It can be regarded as documenting what happened during the lesson, mostly focusing on the problems encountered throughout the lesson. It is an individual report about the teachers’ classroom performance based on memory. Therefore, it is somewhat limited.

Richards and Farrell (2005) stated that a lesson report could be compiled in two different forms. The first one can be done as a written narrative. It is the summary of the lesson which is written in both a descriptive and reflective way. In the descriptive section, teachers describe what happened during the teaching process. In the reflective part, teachers critically analyse the lesson noting things that functioned well and the points that did not function well in order to improve his/her teaching. The second format can be by using a checklist and/or questionnaire. Checklists and questionnaires can be developed individually or in collaboration with colleagues and

they may focus on just one aspect of the lesson, such as giving instructions, or they can cover the whole lesson.

Furthermore, documentation of class observations provides a new window for the future career development of teachers. In this sense, it can be considered as a reflective document in which one can evaluate his/her own teaching.

2.5.4. Audio recording a lesson

Another way of self-monitoring is audio recording a lesson. It is extremely simple, easy, and practical to employ but it provides more information when compared to lesson reports. Due to the technological advances in audio recording gadgets, a micro recording tool or even a mobile phone can be used to record all the conversation in a lesson. It is used particularly for capturing the conversational exchange between the parties and it allows the teacher to visualise the moment when listened to, as it is impossible to recall everything comprehensively about the lesson, especially the conversation between parties, when the lesson is over. In addition, listening to an audio-recorded lesson is less challenging than the other two types of self-monitoring as teachers can listen to their recordings anytime and anywhere. Hereby, teachers can focus on particular features of their performances such as instructions, giving feedback, providing reinforcement, interaction with students and the proportion of their talking time; this process can be considered as a trigger for teachers' change (Osterman & Kottkamp, 2004).

On the other hand, it also has some downsides as making an audio recording may affect the dynamics of the lesson due to the knowledge of being recorded. Furthermore, there may be background noise which distracts from the recording quality and the place of audio recorder, which again affects the recording quality of

your voice or your students' voices if it is anchored to one single place in the classroom. Freeman (1998 cited in Richards and Farrell, 2005) suggested some solutions to solve these problems such as using multiple audio recorders in distinct parts of the classroom or portable audio recorders with a portable microphone.

2.5.5. Video recording a lesson

Among the other ways of self-monitoring implementation in class, video recording a lesson is the most effective as it offers rich and in-dept data with both voice and vision (Richards & Farrell, 2005). Therefore, it is more valuable than the other two practices of self-monitoring. Although there are several pitfalls that can be encountered while video recording a lesson, such as privacy matters, provocation of anxiety, and technical problems (Lofthouse & Birmingham, 2010; Jordan, 2012), the result is often well worth the effort (Penny & Coe, 2004, Tripp, 2009, Tripp & Rich, 2012a). It provides teachers with a rich source of information to observe classroom acts without any prejudice and in an objective way (Osterman & Kottkamp, 2004). Once teachers watch their own recordings, they can understand their own behaviour and the students' reactions to their actions better (Brookfield, 1995; Clarke 1995). In this way, teachers can discover and analyse their common behaviours such as teacher talking time, expressions and gestures, tone of voice, posture, and board usage.

In other words, video self-monitoring as a reflective activity enables one as a teacher to become a more autonomous, self-directed learner which yields progress in the profession. Video records not only supply valuable data about self, but they also provide information about the whole teaching process including students' acts, physical classroom atmosphere, teaching materials, and activities used in this process. In addition to the use of this critical lens as a self-reflection tool, it provides the

opportunity to discuss their behaviours with others and benefit from those discussions. As it provides a lasting documentation of the teaching process, it can be reviewed several times alone or by peers where teachers can compare the perceived event and actual event. Furthermore, a range of easy-to-use video cameras is now available on the market which are affordable to both teachers and institutions, enabling the procedure to be more practical and more popular.

In this study, video recording a lesson as a self-monitoring activity is employed to assess its effect on pre-service teachers' reflectivity levels and teacher knowledge growth. Therefore, relevant research about video use in teacher education context, and its use as a self-monitoring activity, are presented in the following sections.

2.6. Video Use in Teacher Education

Video use in teacher education has a history of several decades. It is accepted as a unique tool to provide evidence of the complexities of the teaching process and it offers a window to observe both ourselves as teachers or others to reflect upon the actions. It has been widely used for the personal growth of teachers all around the world to fill the gap between theory and practice (Tochon, 2008; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006).

Sherin (2007) stated that the initial studies of video use in teacher education commenced in the USA in the early 1960s due to technological innovations in video and camera technology. Subsequently, teacher education institutions in the USA began to employ observations based on video recordings in order to prepare them for real teaching situations. Following this innovation, the process of video-self-monitoring or watching others' video recordings grew into a widespread practice in

teacher education (Levis, 1987, Willis & Mehlinger, 1996; McIntyre, Byrd & Foxx, 1996). Nevertheless, the use of video in teacher education was expensive and unfeasible to in those years. Consequently, research related its influence on teachers' professional development was scant. Recently, advanced in video technology has made this equipment much more affordable and user friendly and several video editing and analysis programs which allow teachers easily to watch and analyse their performances have been developed (Rich & Hannafin, 2009). In addition to the digital video technology, screening gadgets can now be obtained by the average consumer and this enables teachers to watch their recordings anytime and anywhere. Therefore, the number of the studies focusing on the effects of video use in teacher education have been increased (Maclean & White, 2007, Tripp & Rich, 2012b).

In the history of teacher education related with video use, microteaching can be considered as the first tool employed to enhance teacher learning in which part of the lesson was recorded for reviewing the strong and weak sides of the lesson, particularly focusing on one aspect of the lesson such as lecturing or leading a discussion. Then, that performance was watched immediately following by peers or a supervisor to analyse one's success in that particular teaching strategy. Video feedback was provided by peers, supervisors, and the prospective teacher himself. The Stimulated Recall technique was used in this process as video stimulates the memory and results in more accurate verbalizations (Tochon, 2008). The early utilisation of video in teacher education was based on the behaviourist view of teaching in which model-based training was favoured. The main purpose was to train future teachers in an abbreviated time by bridging the gap between theory and practice. Eventually, microteaching became a widespread practice throughout the UK, Europe, North America, and Asia in teacher education programmes (Tochon, 2008).

Ten years later, after the introduction of video in teacher education, another use of video, called interaction or lesson analysis, became popular. In this method, prospective teachers were required to employ an observation instrument for video analysis which enabled trainers to focus on a specific set of observable student or teacher behaviour, such as the use of praise or criticism by the teachers (Sherin, 2007).

With the shift in educational psychology from behaviourism to cognitive psychology in the early 1980s, the focus of video use in teacher education also altered from how teachers behave in the classroom to what teachers think. As teaching was considered a complex activity, the information provided by expert teachers was accepted as a rich source. Therefore, modelling of an expert teachers' style in which videotaped recordings of expert teachers were shown to the novice teachers or video recordings of the novice and experts for the same lesson, were compared and discussed and introduced into teacher education programmes. In this way, novice teachers were expected to become more competent in their teaching behaviours. Sherin (2007) highlighted that the use of video to model expert teaching sparked off "a quantum leap in teacher education research and teacher learning" (p. 5).

At the end of the 1980s, the effect of behaviourism in teacher education research vanished and the study of teacher cognition became popular. Research on teacher cognition tried to find new ways of teacher development and "video-based cases" became popular and accepted as an innovative method in which group of teachers participated in "case discussions". Sherin (2007, p.6) emphasised that employing in video-based cases, researchers focused "not only on what teachers know but how that knowledge is presented". The assumption about the cases was that they

provide teachers with relevant knowledge as they are based on real teaching contexts and our tendency to hold knowledge in chunks.

In the early 1990s, use of hypermedia programmes along with video recordings became popular. With the help of these programmes, video recordings could be linked to text and graphics which allowed teachers to examine the video not only in chronological order but provided them with multiple starting points and multiple paths (Sherin, 2007).

Along with this transformation, video use for the recording of observation has been used for more than 30 years in the field with a shift in their focus (Sherin (2007). The earliest use of video was to assist supervisors to prepare feedback rather than being in the classroom for live observation (Olivera, 1965 cited in Sherin, 2007), which saved supervisors' time. Today, supervisors can use video segments to prepare feedback; these segments can be watched together and can be used for group discussion and reflection.

In addition to Sherin's classification of video use in teacher education, Brouwer (2011) pinpointed three different implementation processes in his review regarding video usage for teachers' professional development. These are orientation, support, and assessment. The first one, orientation, includes videos of expert teachers which are watched by prospective teachers to understand the requirements of the teaching job. Brouwer (2011) called these videos "trigger videos" as they clearly demonstrated multidimensional classroom conditions where teachers experienced conflict and tried to find different solutions (p. 2). The second domain is support, where video serves as a tool for instructing. Expert teachers' video recordings or the self-recordings of teachers can be used for instruction. In other words, video is

analysed for training purposes. The last domain is assessment, where video is analysed to assess the competence of the teachers.

For more than 50 years, video has been used for teachers' professional development. In parallel to video use, reflective practice inquiry has also been searching for new forms of teacher development. As the purpose of both methods is teachers' professional development, video recording has started to be used as a reflective activity to promote teacher development. In this sense, video recordings (of the whole lesson or segments of the lesson) are employed as a point of reference for reflection for various purposes (Wu & Kao, 2008) and the relevant literature proposes that together, the use of reflection on practice and video recording can improve teachers' professional development (Berliner, 1988; Dreyfus, 2004).

Among the uses of video in educational research, its use to promote teacher reflection is the most common (Haw & Hadfield, 2011). It provides a mirror in which observers watch themselves from a distance or move closer and explore the scene from a different angle. Therefore, the use of video as a mirror metaphor provides the following opportunities for the observer.

- Video can present various 'objective' images of the participant either back to themselves, self-generated or by others – whoever holds the mirror up to the observer.
- Video technology means that a wide range of participant activities- across a variety of contexts- can be reflected upon in various combinations – the mirror as a reflection of a changing self.
- Video allows an observer to explore repeatedly an image from different directions and varying proximities, thus allowing them to consciously shift their focus as they reflect – mirrors that can provide a full-length 360° image and detailed close-ups.

- The video image shown to participants can be designed so as to present alternative or contradictory ‘images’ of themselves and challenge their current conceptions – the distorted mirror that exaggerates or shrinks key features.
- Video can present to participants their own image set alongside those of others, which they can then reflect on individually or with others – the hall of mirrors.

(Haw & Hadfield, 2011, p. 51-52)

2.6.1. Video use as a reflective tool for teachers’ professional development

Departing from the saying, “a picture is worth a thousand words”; it is not wrong to suggest that video recording and analysis could be an efficient tool for assisting teachers to reflect on their class performance. Numerous studies have sought to identify the potential impact of video recording and analysis as a reflective activity on teachers’ professional development and the results of those studies have suggested that video recording and analysis as a self-development tool can be a precious reflective activity for teachers’ professional growth (Brophy, 2004, Penny & Coe, 2004; Romano & Schwartz, 2005; Whitehead & Fitzgerald, 2007; Harford & MacRuairc, 2008; Rich & Hannafin, 2009; Tripp & Rich, 2012; Picci, Calvani, & Bonaiuti, 2012, Sayın, 2013; Arya & Christ, 2013).

Even though advantages of video analysis for reflective practice are reported in the literature, their method of reaching this outcome differs extensively from each other as they all focus on different dimensions of video analysis, such as the use of different reflection tasks, individual/collaborative reflection, guiding frameworks, reflection facilitation, or measuring reflection for a different purpose (Tripp & Rich, 2012a). They also state that there is a broad array of diversity in reflection tasks, guiding framework methods used to measure reflection, and application of reflection activities. Therefore, there is no standard framework for the advantages of video

analysis reported in the literature. Thus, several selected studies that reveal the advantages of video self-monitoring for promoting reflectivity and teacher change are exemplified below.

Tripp (2009) conducted an experiment in which a prospective teachers' experience of reflection with a video analysis tool was compared with traditional reflection with a supervisor in the form of a post-lesson conference. The study concluded that reflection with a video analysis tool was more effective than the traditional reflection model as the video recording provided an opportunity to notice details that the prospective teacher could not recall in the traditional method and it aided the improvement of her vision.

In another study, Halter (2006) compared the reflectivity growth of pre-service teachers in terms of reflectivity level and reflectivity focus in an empirical way. Participants were required to carry out periodic reflective tasks regarding their classroom performances. One groups' reflections were based only recalling of classroom actions and the other group used video recording to reflect on the incidents. The study concluded that pre-service teachers focus of reflection increased when video analysis was used to reflect on their teaching performances. Furthermore, the study proposed that video analysis can be a strong predicator of teachers' professional growth particularly in making connections between pedagogy and classroom interactions.

Similar to these studies, other studies investigating the effect of video recording and analysis demand teachers to carry out some reflective activities based on their recorded performances. The results of these studies assert that video recording and analysis as a self-reflection activity offers teachers an opportunity to

observe their actions, students' responses to these actions, and their interactions in a comprehensive manner by allowing teachers to spot many incidents that they do not detect when they reflect on classroom performances based on their recalling ability of classroom events (Halter, 2006; Rich & Hannafin, 2008; Miller & Carney, 2008; Wright, 2008). Accordingly, researchers suggest that video-based reflections are much more detailed, in depth and precise than reflections produced without video (Shepherd & Hannafin, 2009). Additionally, reflections based upon video also enhance teachers' capability to make use of performance evidence to assist their reflective comments (Sherin & van Es, 2005, 2009).

Tripp and Rich (2012b) stated that the results of the studies on video use to facilitate teacher reflection could be grouped under two categories. The first is improved ability to evaluate teaching and the second is changes made to teaching. They stated that a substantial number of studies on the impact of video use on teacher reflectivity report that video use improved teachers' evaluation ability of teaching. They proposed that once teachers employed video to reflect they could:

- 1) identify gaps between their beliefs about good teaching and their actual teaching practices,
- 2) articulate their tacit assumptions and purposes about teaching and learning,
- 3) notice things about their teaching that they did not remember,
- 4) focus their reflections on multiple aspects of classroom teaching,
- 5) assess the strengths and weaknesses of their teaching.

(Tripp and Rich, 2012b, p.729)

They concluded that teachers developed their teaching behaviours or strategies, such as question asking and use of positive statements, in a constructive way after reflecting on their own or others' videos.

In some studies, change in teacher practice is explored due to classroom observations and observation of video recordings. These studies reported that conducting video reflection activities influenced teachers' classroom actions and decisions in a constructive manner (Dawson, Dawson, & Forness, 2001; Hougham, 1992; Shepherd & Hannafin, 2008, 2009). Among these studies, Hougham's work (1992) was an empirical one in which video-based reflections were confronted with traditional reflection. The results concluded that the group of teachers employed video-based reflections improved their question-asking strategies more than those who used traditional reflection.

In addition to these benefits, some authors stated that it increased specific skills which promote reflection, particularly in science and maths teacher education. Video analysis is a cognitive activity; it requires the ability to notice and interpret, which is defined as recognition of what happens in the classroom. It is also defined as professional vision, which is one of the key components of teaching expertise and needs to be learned (Sherin, & van Es, 2009). Van Es and Sherin (2002) defined the ability to notice as consisting of three components. The first is the ability to determine the most significant things in a complex teaching process. Second is the ability to associate what is observed with the basic principles of teaching and learning. The last is the ability to make judgements about a complex classroom situation by using one's personal knowledge and experience. The use of these three abilities make a complex classroom environment easier to understand.

One of the pioneers in the field, Sherin (2002), who funded "Professional Vision: the role of video in teacher learning Project", reported that the implementation of video-based self-reflection fostered the abilities of professional vision which developed expert classroom practice in novice teachers. However, van Es and Sherin

(2002) emphasised that video reflective analysis would only be effective if teachers had the capability of noticing. In other words, if one does not notice things in his/her teaching practice, then he/she does not need to change. Therefore, video provides a venue for the improvement of this ability as one can pause, take notes, rewind, and play the captured scenes of the complex but real classroom environment (Snoeyink, 2010; Sherin & Van Es, 2005). In this way, teachers have the chance to observe the same scene multiple times which leads to improvement of the noticing and interpreting ability or teaching expertise. In other words, once they start to notice classroom events, they can move from the stage of reflection on action to reflection-in-action (van Es & Sherin, 2002; Sherin & Van Es, 2005; Osmanoglu, Isiksal, Koc, 2015). In their study, Kleinknecht & Schneider, (2013) concluded that video use can assist pre-service and in-service teachers' ability to notice in a constructive way and this process enhances their ability to clarify the key aspects of classroom interactions. In addition, Sherin and Van Es (2005) proposed that video usage enhanced teacher's ability to "notice", which might result in improvement of critical reflection. In a more recent study, Sun (2012) explored the weight of video-aided reflection on novice science teachers' cognitive process and concluded that video-aided reflection assisted the novice teacher to "notice what was needed to improve in their teaching practice", realise how various elements in teaching were interrelated, and "construct, restructure, or reconstruct their professional knowledge" (p. i).

In another study, Sherin and van Es (2009) investigated the impact of video club meetings to analyse the teachers' roles, students' actions, and classroom interaction of pre-service maths and science teachers. Their study concluded that the video club meetings changed the focus of participants from methodological issues to

what and how students think, and it affected the participants' video analysis procedure in an interpretive way rather than being evaluative.

Spurgeon and Bowen (2002) conducted a research with pre-service teachers which required them to record their performances and then edit it by using a video editing tool called i-Moive in order to evaluate their actions. The study concluded that the use of multimedia portfolios increased critical reflections of participants.

For pre-service teachers, practicum or teaching practice course is the most significant period in which they can link theory and practice as it is their first hands-on experience. However, Eröz-Tuga (2013) stated that they might feel frustrated as they were demanded to teach in front of university supervisors for the first and last time and get feedback following their teaching session, and they did not have a second chance to make use of this feedback in the teaching practice course context in Turkey. Therefore, she conducted a research with pre-service teachers investigating the power of video recorded self-reflection and video-based supervisor and peer feedback on their teaching perception. The findings indicated that reflecting on their own teaching and commenting on their peer's performance increased their awareness about teaching and provided insights into their own strengths and weaknesses.

In a more recent study conducted in Turkey, Yumru (2015) investigated in-service EFL teachers' insights on the most effective teacher learning activities which the participants believed influenced their learning. The outcomes of the study suggested that self-monitoring in the form of video recording and self-evaluation of the lessons was the dominant perception of the teachers which yielded teacher change. However, most of the participants in this study confessed that this kind of activity was

totally new to them or they stated that they had never heard or employed this activity in their teaching career, which could be considered as a future research indicator.

In addition to the individual studies mentioned above, some other reviews seek to reveal the impact of its use as a reflective activity on teachers' professional development. In their meta-analysis, Tripp and Rich (2012a) surveyed 63 research studies published between 1991 and 2010 which covered the effect of pre-service and in-service teachers' video-based reflections on their teaching. They reported that the overall findings of the review studies supported video usage for teacher reflection; however, the processes employed in reaching this outcome differed widely across studies regarding the use of video reflection individually or collaboratively, the use of tasks and frameworks for video reflection, and assessment procedures employed for the influence of video reflection. They concluded that future research was required to calculate the ideal combination of these processes which might benefit teachers' professional development.

In their state of the art article, Marsh and Mitchell (2014) reviewed the related literature to present how video use in teacher education promoted the professional growth of teachers. They first identified the pedagogical of video use, and then examined the reported impact of video use resulting in development of reflection, improvement of the noticing ability, and other promising benefits. This review concluded that video use served teacher learning (making theory to practice connections) by developing their capacity for reflection and analysis and resulting in an improvement of noticing skills or professional vision which led teachers (particularly novices) from superficial classroom features to more substantive and significant interaction. Another outcome of video use is presented as the enhancement

of teacher subject knowledge, but the limited evidence suggests that this aspect requires further investigation.

Findings of the studies mentioned here are in favour of video use as a reflective activity for teachers' professional development, "particularly pre-service teachers". However, the literature suggests that the process of reaching this positive outcome varies across studies as they focused on different dimensions and employed different methods, thus, further research was proposed to unveil the best practices. In addition, the use of video-based self-monitoring has not been extensively investigated in an experimental way in the literature, particularly in the Turkish context. Therefore, there is a gap in the Turkish literature on the influence of video-based self-monitoring on reflectivity growth and teacher knowledge growth. Consequently, this study intended to explore the possible and promising effects of self-monitoring activity in the form of video recording and analysis in a pre-service EFL teacher education context on pre-service teachers' professional development regarding their reflectivity levels and their performance in terms of planning and preparing a lesson and selecting and utilising resources and materials, their language in the classroom, and classroom management.

2.7. Summary of the Literature

In this chapter, a comprehensive literature review regarding the purpose of the research questions was presented. Starting with the umbrella term of teacher professional development, it narrowed down the issue to language teacher development, teacher learning, and teacher change from novice to expert. Then, reflection as the most influential factor of teacher professional development was reviewed and its types, levels and how it was measured, and the relationship between

the term and language teacher professional development, was discussed. Following the section about reflection, the review continued with reflective strategies for professional development and it funnelled the review towards self-monitoring activity in the form of video recording and analysis. The chapter ended with the positive outcomes of video use as a reflective tool for teachers' professional development.

In summary, any kind of reflective practice is suggested as profitable for both pre-service and in-service teachers for their continuous professional development. Among these suggested practices, video recording and analysis as a self-development tool is considered to be a stimulating reflective activity for teachers' professional development. The literature review provides evidence of how this process influences teachers' change and classroom practices. However, there is still a gap in the literature on how video analysis influences teachers' change process, and which combinations of video analysis have the most impact on teachers' change is still under investigation. Therefore, this study attempts to contribute to the relevant literature about the effect of self-monitoring in the form of video recording and analysis on pre-service teachers' reflectivity levels and their teaching knowledge, which is believed to augment the transformation of pre-service teachers into expert teachers.

The following chapter presents the research methodology and overall procedures employed for the purpose of the study.

CHAPTER 3

METHODOLOGY

3. 1. Introduction

The overall aim of this section is to address the methodology and procedures used in the study. The chapter starts with a statement of the research questions and the rationale of the overall research design. Then, it continues with a brief description of the context of the study, sampling method and participants. Next, it deals with the instruments of data collection, procedures followed in collection, and process of data analysis. The chapter ends with a summary of the methodology.

3. 2. Research Questions

In the previous chapter, it is highlighted that video recording and analysis as a self-monitoring tool can be a beneficial reflective practice for teachers' professional development and there is limited research about its effect on teachers' professional development, particularly in the Turkish context. More importantly, in the Turkish context, to the best of researcher's knowledge, no study has focused on teacher transformation regarding their knowledge growth and reflectivity growth in which teachers' reflections with video and without video is compared. Therefore, the purpose of the study is to explore the potential impact of video recording and analysis as a self-monitoring activity in an EFL teacher education context on pre-service teachers' professional development. This encompasses their reflectivity levels and teaching knowledge in terms of planning and preparing a lesson, selecting and utilising resources and materials, teachers' language use in the classroom, and

classroom management. Therefore, the study endeavoured to seek answers to the following research questions.

1. Does the implementation of video based self-monitoring have an effect on the reflectivity level of pre-service EFL teachers?

2. Does the use video based self-monitoring have an effect on the competencies of pre-service EFL teachers in terms of their knowledge on the following concepts:

- a) Planning and preparing a lesson
- b) Selecting and utilising resources and materials
- c) Teachers' language use in the classroom
- d) Classroom management

If so... How?

3. 3. Research Design

In the study, a mixed methods research design was employed. The use of this design requires researchers to follow a procedure which involves the implementation of qualitative and quantitative methods for data collection and data analysis to understand the research phenomena (Creswell & Clark, 2011). In brief, use of these two methods together explicates the research questions more precisely than each method can do discretely.

It can also be explained as a “type of research design in which qualitative and quantitative approaches are used in the type of questions, research methods, data collection, and analysis procedures and inferences” (Tashakkori & Teddlie, 2003, p. 711). In other words, it makes use of employing multiple ways to systematically

investigate a research phenomenon. Studies following the principles of the mixed method design are products of the pragmatist paradigm and they are quite popular in social science studies. The purpose of employing this design in most social science studies is to overcome the restrictions of a single design and assist in the results of each inquiry.

Mixed methods research design is considered a new research area and it has become widely popular among researchers in the last decade. As a growing methodology, there are several types of mixed method designs. Tashakkori and Teddlie (2003) state that they found almost forty different types of mixed-method designs in the literature. Creswell and Clark (2011) classified these forty methods. According to this recent classification, six major groupings have occurred. These are “the convergent parallel design, the explanatory sequential design, the exploratory sequential design, the embedded design, the transformative design, and the multiphase design” (Creswell & Clark, 2011, p. 69-70).

Among these designs, the convergent parallel mixed methods design was employed in this study. Creswell (2014) mentioned that it was probably the most well-known mixed method strategy. As noted by Creswell and Clark (2011, p. 70), this design is characterised by collection and analysis of two independent strands of qualitative and quantitative data simultaneously. The priority given to both methods is equal, the data gathered from both ways is analysed independently, and then the results are mixed during overall interpretation. This approach is also claimed to enable triangulation and gathering of stronger data for validity and reliability concerns.

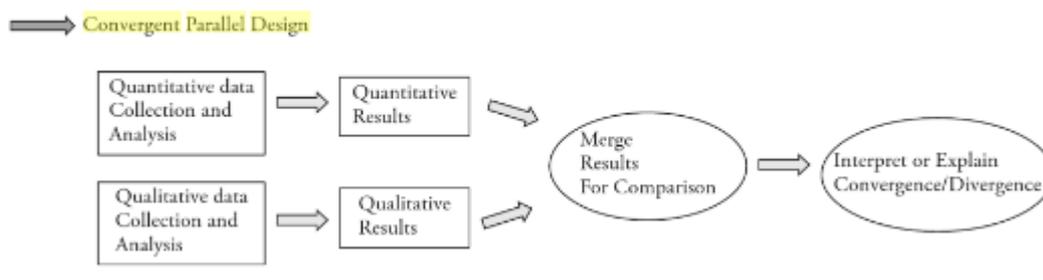


Figure 3.1. Convergent parallel design (Adopted from Creswell and Clark, 2011, p.69)

The figure 3.1 illustrates how this method actualizes the research. The details of how this model was implemented can be seen in sections 3.8 and 3.9.

3.3.1. Rationale for choosing a mixed method design

In the last decade, there has been a tendency to employ mixed method research designs as it was realised that one data source may not be sufficient, or the initial results of the quantitative data need to be further explained to account for the phenomena in social studies (Palinkas et al., 2015). It is described as “inclusive, pluralistic, and complementary”, and “it suggests that researchers take an eclectic approach to method selection and the thinking about and conduct of research” (Johnson & Onwuegbuzie, 2004, p. 17). The main rationale for mixing data collection and analysis procedures is that none of the methods is claimed to be appropriate and sufficient by itself. When they are used together, they are believed to complete and support each other and therefore provide more accurate results.

Due to the purposes of the study addressed in the two multi-faceted research questions, both quantitative and qualitative data collection methods were applied concurrently by keeping the strands independent during analysis and then mixing the results during interpretation. Use of the convergent parallel design enables the

researcher to look for confluence, divergence, inconsistencies, or associations between two sources of data.

3. 4. Setting

The English Language Teaching Programme at a state university located in the northwest of Turkey constitutes the universe of the study. This programme offers a four-year degree course to pre-service teachers on teaching English as a foreign language and they are qualified to be English teachers upon graduation. Teacher education programmes in Turkey are designed by the Higher Education Council in order to provide equality in the competencies of future teachers among different education faculties. In the initial year of the programme, courses about language skills such as Writing I and II, Listening and Pronunciation I and II, Advanced Reading, Contextual Grammar I and II, and Lexical Competence are introduced. In the following year, pre-service teachers are offered some introductory courses to English Language Teaching. Some of the courses are: Approaches to ELT I and II, Language Acquisition, ELT Methodology I, Linguistics I and II, and English Literature I and II. In the third year of the programme, pre-service teachers are required to follow courses mostly focusing of how they can teach the English language. These courses can be itemised as: ELT Methodology II, Teaching English to Young Learners I and II, Teaching Language Skills I and II, and Literature and Language Teaching I and II; in which pre-service teachers are provided with pedagogical content knowledge and a limited practice opportunity, usually in the form of microteaching. As senior students, they are exposed to real field experience courses such as School Experience and Teaching Practice in their final year. The present study was carried out within these field experience courses.

These courses can be considered the most important phase for pre-service teachers towards becoming a teacher as they are expected to integrate all the theoretical knowledge that they have been taught and practical experience. In these courses, senior students are assigned to the schools in small groups and the cooperating teacher guides them for the purposes of the courses.

The School Experience course offered in the 7th semester of the bachelor's programme specifically focuses on microteaching. In this course, pre-service teachers are sent to secondary or high schools where they are demanded to spend 4 hours per week in the school environment to perform assigned duties. All the duties they are required to do are stated in a booklet prepared by the sending-faculty members. These duties include observing English lessons / pupils / teachers / teaching and learning processes focusing on teaching methods, classroom management skills, questioning asking skills and teaching a 15-20-minute lesson (Köksal, Topkaya, Yavuz & Erdem, 2008). In other words, they try to observe the learning and teaching environment from the point of the teacher. They are expected to be critical observers and provide suggestions to problematic situations. Once they have completed the required task at a MoNE School (Ministry of National Education), they meet with their mentor at the university and share their experience. Even though they are not specifically taught how to be reflective, they try to comment on their experience in a reflective way. In the study, both groups followed the routine procedures of the school experience course and they did real time observations and wrote mostly descriptive entries based on their observations. In addition to the requirements of the course, participants in the study group had training about how to be reflective over video recordings. The procedures followed for training sessions are described in section 3.8 in details.

The other course is teaching practice or practicum. It is one of the field experience courses offered in the last semester of the bachelor programme and it focuses particularly on macro teaching. In this course, senior students are demanded to spend 14 weeks at the assigned MoNE schools. These schools are secondary schools or high schools. In the first two weeks, they are required to make observations about the life of a teacher at school in general and teachers' acts in the classroom during teaching. In this observation period, pre-service teachers are demanded to note down the strategies used by the teachers and teachers' classroom management skills. In this way, pre-service teachers can realise the variables that effect teaching environment and they enhance their deduction skills.

Through this course, it is expected that the pre-service teachers will be much more knowledgeable about the study of English Language Teaching by focusing on planning a lesson, choosing and adapting resources and activities, methods of delivery, and classroom management in consideration of the needs of students and the institution. It is also required for pre-service teachers to prepare 40-minute lesson plans regularly and implement these plans at least four or five times throughout the semester. In this process, they firstly design lesson plans, discuss with their mentors about the lesson flow, and make any necessary changes before the implementation phase. In other words, they are expected to be prepared for real classroom settings.

In addition to these processes, the teaching practice course has some explicit outcomes. At the end of this course, pre-service teachers are anticipated to have the competencies of how to use their content knowledge for the procedures of planning, implementing, and evaluating a successful lesson at any level. They will be able to comment on their own and their colleagues' performance following the teaching

process by considering some certain parameters. Finally, they reflect on the entire process of the teaching practice course.

Teaching practice course can be considered as a transitional zone in which pre-service EFL teachers start to transform from a student to teacher. The experience that they have in this period can shape their perceptions about teaching profession in general and particularly raise their awareness on their own capacities and abilities.

In the study, both groups spent 14 weeks and 6 hours at each week in the regular MoNE high schools and the study was conducted in the 9th and 10th grades at these schools. The study group implemented the video recording and analysis as a self-monitoring activity in order to reflect their performances whereas the control group used reel time observations to reflect on the requirements of the course. The comprehensive procedures followed by each group is presented in section 3.8.

3. 5. Sampling Method and Participants

For the research purposes, the convergent parallel mixed method design was selected. However, there is limited literature about the mixed method sampling and there is no common typology for mixed method sampling (Teddlie & Yu, 2007). As being the former research design, sampling strategies for the quantitative method employed in a mixed method design are well defined and particularly grounded in the probability theory, while sampling strategies for qualitative inquiry are less definitive (Palinkas et al., 2015). Therefore, the framework for mixed sampling design provided by Onwuegbuzie and Collins (2007) was employed in this study.

According to their framework, the classification of mixed method sampling is based on two major criteria. The first is time orientation, which refers to the data

collection time in the quantitative and qualitative phase of the study. In other words, it is related to whether the data of the qualitative and quantitative components of the study are gathered concurrently or sequentially. If the data is collected at approximately the same time, then it is called concurrent time orientation. In this case, both data are combined and interpreted at the data interpretation stage. If the data from the quantitative and qualitative part are collected at distinct stages of the study, such as following each other, then it is called sequential time orientation. The second criterion is related to the sample relationship, where the connection of quantitative and qualitative samples is questioned. There are four categories under this orientation, which refer to whether the samples of both designs are identical, parallel, nested, or multilevel. In the first one, titled the identical sample relationship, the same participants partake in the quantitative and qualitative stage of the research. In the second one, called parallel sample relation, the samples that participated in both the quantitative and qualitative designs are different, but they are selected from the same population. In the third one, the nested sample relation, participants for the second stage of the study are chosen from the sample used for the first stage of the study. For example, a quantitative analysis can be carried out with many participants in the first stage of the study and then some of them are selected for the second stage in which qualitative analysis can be conducted. The last one, multilevel sample relation, is where participants for both parts of the design are selected from diverse levels of the population. Onwuegbuzie and Collins (2007) combined these two criteria and offered eight different mixed method-sampling designs. These are “identical concurrent, identical sequential, parallel concurrent, parallel sequential, nested concurrent, nested sequential, multilevel concurrent, and multilevel sequential” (p. 294). They also labelled these designs 1 to 8, as illustrated in Figure 3.2.

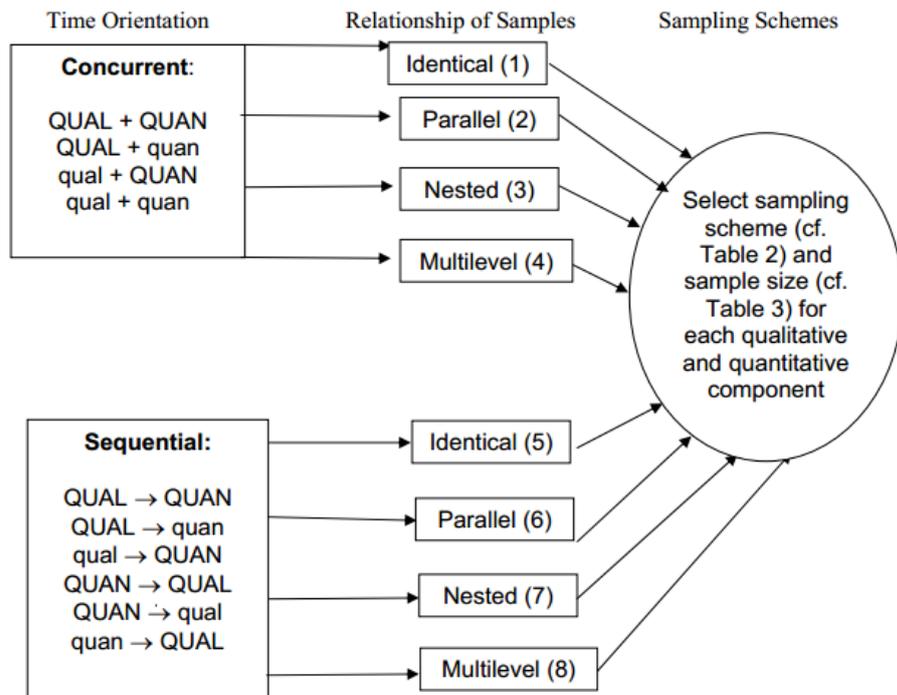


Figure 3.2 Two-dimensional mixed method sampling model-providing typology of mixed methods sampling designs. (Adapted from Onwuegbuzie and Collins, 2007, p.294)

Among these sampling designs, the identical concurrent sampling design was chosen as it corresponded to the design of the study. Particularly, both quantitative and qualitative data were collected from the same participants at approximately the same time of the study. As represented in Figure 3.2, the next step is selecting the sampling scheme. Since the object of the study was to understand the insights of pre-service teachers about the research topic rather than generalisation of the results to the entire population, a random purposeful sampling strategy was employed for the selection of identical groups. In this strategy, random cases are selected from the population and then a desired number of individuals are randomly chosen as participants. The reason for choosing this sampling scheme is to increase the credibility of the results. Therefore, thirty senior students studying in the ELT

Department at a state university located in the southwest of Turkey were chosen for the purposes of the study from among the 130 students in the population. Then the two groups, namely, study and control, were formed by random assignment. Fifteen students were appointed to the study group, to be trained on employing self-monitoring in the form of video recording and analysis, and other fifteen participants were appointed to the control group, who followed the regular procedures for the teaching practice course.

Each participant was a native Turkish speaker and they had graduated from different high schools. As the ELT departments are female-dominant in Turkey, most of the participants were females. At the time of the study, the GPA means of the participants was 2.76, which could be interpreted as denoting that participants were not selected from among students with high academic success. The characteristics of the participants are tabulated in Table 3.1 below. As willingness to participate in the study on a voluntary basis had a weighty influence on the outcomes of the study, participants were requested to sign a consent form in advance (Appendix A). They were notified about the research study and were assured on confidentiality issues. In the qualitative analysis of the study, real names of the participants were replaced with pseudonyms for confidentiality purposes.

Table 3.1.

Distribution of the Participants

Groups	Female	Male	GPA Means
Study	8	7	2,71
Control	13	2	2,80

3. 6. The Researcher

The researcher of the present study is an experienced EFL teacher and teacher trainer. At the time of the study, he was a full-time instructor of BA courses in the ELT department of a Faculty of Education at a state university located in the southwest of Turkey. He was teaching the Communication Skills course, School Experience course and Teaching Practice course. At the same time, he was also responsible for the Basic English course at the Preparatory School in the ELT programme.

3. 7. Data Collection Instruments

For the requirements of the study design, both quantitative and qualitative instruments employed for data collection. For the collection of quantitative data, the Profile of Reflective Thinking Attributes instrument and Teaching Knowledge Test were employed. These instruments are described below.

3. 7. 1. The profile of reflective thinking attributes instrument

For the purpose of assessing possible effects of video recording and analysis as a self-monitoring activity in a quantitative way, the profile of reflective thinking attributes instrument designed by Taggart and Wilson (1998) was employed to assess different levels of reflection. The instrument comprises three reflection levels that can be obtained through self-evaluation of ones' own experiences. Taggart and Wilson (2005) proposed that the attitudes and skills of being a reflective practitioner and the scores obtained from the instrument through self-evaluation are associated with the three reflectivity levels which are illustrated on the Reflective Thinking Pyramid in Figure 3.3.

These levels are referred to as the technical level, contextual level, and dialectical level, which follow a hierarchical order. Technical is the initial level, in which practitioners reflect with minimal schemata when dealing with problems. As stated by Taggart and Wilson (2005), reflection at technical level is derived from the use of previous life experiences in order to solve problems confronted in teaching. The focus of reflection at this level is the practitioners' behaviours, skills, and content knowledge while they are designing, implementing, and assessing a lesson. This level provides a ground for the teachers to choose the right activities and materials to reach the outcomes of the lesson. The second one is the contextual level, which requires practitioners to search for alternative ways grounded in attained knowledge in order to overcome issues. At this level, the practitioner considers the needs of students and tries to connect theory to practice by analysing, clarifying, and validating teaching practices while designing, implementing, and assessing a lesson. In other words, practitioners start trying to establish a bridge between theory and practice. The highest level of reflectivity is dialectical, where practitioners start to question their actions systematically before teaching, during teaching and after teaching. Furthermore, they enhance their view of teaching and question not only classroom practices, but other issues related with teaching practice. In other words, dialectical practitioners consider moral, ethical, or socio-political issues in connection with the students, parents, school and society and they gain the abilities of constant questioning, individual autonomy, self-awareness and self-actualisation in the design, implementation, and assessment of their teaching practices.

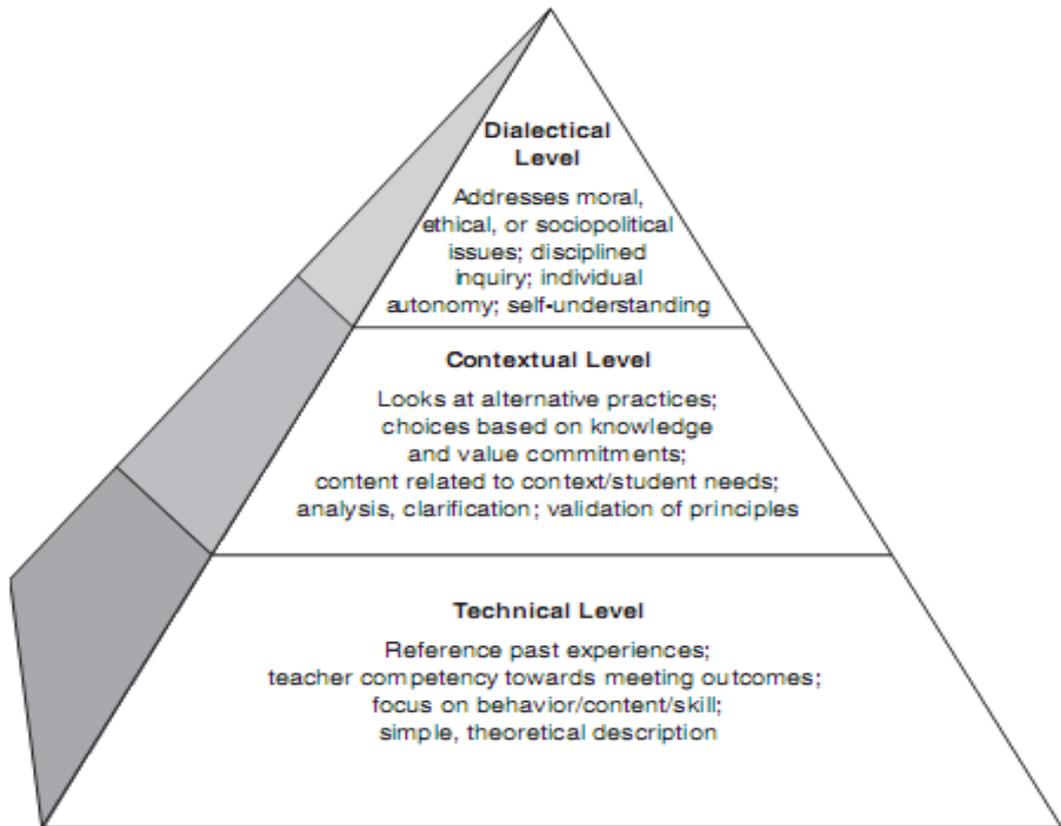


Figure 3.3. The reflective thinking pyramid (Taggart & Wilson, 2005, p.3)

The instrument consists of thirty statements on a four-point Likert-scale ranging from “Seldom” to “Almost always”. The items of the instrument are selected from a list of teacher qualifications which refer an evidence of reflective thinking that are originated by research findings. Participants are required to choose the best matching statement about the situation when they encounter problems while preparing, implementing, and assessing a lesson. According to Taggart and Wilson (1998, 2005), it can be an effective tool for detecting enhancement of the reflectivity level in teachers when it is employed as a pre- and post- assessment instrument in research. Furthermore, it is noted that this tool can be used with practitioners to raise their awareness of their existing reflective abilities and reflective levels as well. The original instrument is provided in Appendix B.

The original instrument was implemented as the participants were pre-service EFL teachers whose proficiency level was sufficient to comprehend the items and participants were more accustomed to the English terminology more than the Turkish forms. Event though the participants had enough level of English and familiar to the concepts mention in the instrument, three academic experts assessed the items of the inventory for their relevance, coverage and comprehensibility. Therefore, content validity of instrument was assessed by having external feedback and it was believed that items of the instrument were valid and comprehensible.

The reliability of the instrument was tested by Kessell and Miller (2001). It was determined as reliable with a .84 Cronbach's alpha coefficient value. The instrument was adapted into Turkish by Gencer (2008) who concluded that the instrument was found reliable with a value of .91 Cronbach's alpha coefficient. Furthermore, the instrument has recently been used in several dissertations in Turkey to assess the change in pre-service teachers' reflectivity levels (Gencer 2008, Ozden 2012, and Gönen 2012). Gönen (2012) also explored the internal reliability of the instrument to use it in the Turkish EFL context and it was determined reliable with .85 Cronbach's alpha coefficient value.

In the literature related with levels of reflective practice and its measurement, there are various instruments aiming to assess the levels of reflection. As the term itself is elusive to define, the instruments used to assess reflectivity are based on different frameworks. However, there is an agreement that there are three levels of reflection which follow a hierarchical order in its nature. Therefore, The Profile of Reflective Thinking Attributes instrument was chosen as a quantitative data collection tool as it classifies reflectivity levels into three categories which are agreed levels.

Furthermore, the instrument was suggested as an operational tool in pre-test and post-test designs. Another benefit of employing this instrument is that it provides numerical ranges for levels of reflectivity. According to these levels, scores from 30 to 75 are referred as technical level, scores from 75 to 104 are referred as contextual level and the scores from 105 to 120 are called as dialectical level. This classification can serve a solution to compare the quantitative and qualitative data.

3. 7. 2. The teaching knowledge test

In today's world, English is accepted as the lingua franca and it is the language that is most studied or taught all around the world. Therefore, there has been a boost in the need of English language teachers. However, this growing demand brings the problem of teacher quality for institutions during the selection process of language teachers.

Due to rising demand from government ministries and schools around the world, University of Cambridge ESOL Examinations (Cambridge ESOL) created a new teacher qualification tool focusing on the most fundamental teacher knowledge that should be attained by successful teachers of English. In the design process, developers of the Teaching Knowledge Test (TKT) aimed to design an instrument which should be available and applicable to teachers working at different stages, independent of their background and experience in teaching. In 2004, TKT was piloted with 1500 English language teachers all around the world. After receiving positive feedback on its coverage, appropriateness, and teacher's interest, it was first officially administered in May 2005 and it was applied to 35,000 people in approximately 60 countries until 2007. There has been growing interest in the test by

many institutions all around the world as it is appropriate for teachers of English in various contexts independent of being a native or non-native speaker of English.

It is advised that some experience of being an EFL teacher is beneficial for TKT candidates, but it is not necessary to follow a preparatory course such as the Cambridge teacher assessment test. In addition, it is appropriate for pre-service teachers, teachers seeking ways of refreshing their knowledge of teaching, and teachers beginning to teach English subsequently teaching a different subject.

TKT aims to assess teachers' knowledge of teaching English as a foreign language. This knowledge covers "concepts related to language, language use and the background, and the practice of language teaching and learning" (Cambridge ESOL 2012, p. 5). In addition to its wide coverage, it is easy to administer as it is constructed in the test format.

In different words, Spratt (2015) states that TKT aims to assess not the procedural knowledge of test takers but their declarative knowledge about teaching. He also analyses TKT by considering the Grossman model of teaching knowledge to reveal what kind of declarative knowledge is assessed. He further claims that general pedagogic knowledge and pedagogical content knowledge are both tested in TKT.

TKT can be regarded as an instrument for supporting teachers' professional growth as it raises their awareness of their present teacher knowledge and demonstrates their weaknesses. Therefore, teachers in favour of taking TKT are recommended to write diaries and keep portfolios and records of their progress as a reflective activity. In this way, their progress in becoming reflective practitioners can foster teachers' reflective thinking skills and this leads to professional development.

In this sense, it is in line with our study in which self-monitoring in the form of video recording and analysis was employed.

TKT is comprised of three modules. In each module there are 80 questions which can be answered by choosing a letter for the appropriate answer. Since TKT is based on assessing teacher knowledge, any skill-based questions about the candidates' proficiency level of English are not included in the test.

Particularly the first module, involving of three parts with 80 objective questions, is designed to evaluate teachers' knowledge about language and language learning and teaching. The second module which has two parts with 40 objective questions for each, is designed to assess teachers' knowledge about planning and preparing a lesson and selection and make use of resources. The third module which has again two parts with 40 objective questions for each, seeks to evaluate teachers' knowledge of managing the teaching and learning process. Samples of both modules of original TKT tests are provided in Appendix D and Appendix E.

As the second research question endeavoured to discover whether the use of video recording and analysis leads to any possible encouraging changes in the competencies of pre-service EFL teachers in terms of their knowledge, only the second and third module of the TKT were employed in the study. Therefore, there is a need to clarify these two modules in detail. In the following tables, the scope and the tasks included in TKT Module 2 and Module 3 are given.

Table 3.2.

Scope and Tasks of TKT Module 2 (Adapted from Teaching Knowledge Test, Module 2 Examination Report, 2007, p.5)

	Description	Areas of teaching knowledge	Task types and format
Part 1	Planning and preparing a lesson or sequence of lessons	Lesson planning – identifying and selecting goals appropriate to learners, stages of learning – identifying the different components of a lesson plan – planning a full lesson, selecting and sequencing activities appropriate to learners and aims – selecting appropriate assessment activities	6 tasks consisting of approximately 40 questions. Tasks include one-to-one matching; 3/4/5-option matching; 3-option multiple choice; odd one out and sequencing.
Part 2	Selecting and utilising resources and materials	Consulting reference resources to help in lesson preparation Selecting and utilising: – course book materials – supplementary materials and activities – aids appropriate to learners and aims	6 tasks consisting of approximately 40 questions. Tasks include one-to-one matching; 3/4/5-option matching; 3-option multiple choice and odd one out.

As indicated in Table 3.2, TKT Module 2 consists of two parts including 40 questions for each part. In the first part, there are six tasks aimed at evaluating the teacher’s knowledge of planning and preparing a lesson and the lesson sequence in general. Detailed information about the tasks is provided in Table 3.3.

Table 3.3.

Scope of Tasks in first part of TKT Module 2 (adapted from Teaching Knowledge Test, Module 2 Examination Report, 2007, pp.7-8)

Task No	Questions covered	Aim	Process
Task 1,	Questions 1-6	Focuses on teaching aims underlying textbook rubrics.	Candidates are presented with a series of rubrics taken from textbooks and required to match them with one of three lesson aims.

Task 2,	Questions 7-15	Focuses on identifying the different components of a lesson plan	This matching task requires candidates to match information from a lesson plan to the lesson plan heading it would come under
Task 3,	Questions 16-22	Focuses on identifying aims of stages in an integrated lesson.	This task requires candidates to choose the inappropriate aim about the stages of an integrated skills lesson.
Task 4,	Questions 23-29	Focuses on ordering stages in a writing skills lesson	Candidates are required to put stages into the right order for the lesson.
Task 5	Questions 30-35	Aims to test candidates' ability to recognise what areas of grammar are assessed by a series of assessment tasks.	Candidates are required to match the tasks with their grammatical focus.
Task 6	Questions 36-40	Focuses on candidates' ability to recognise appropriate ways of testing particular areas of English language use.	In this odd-one-out task, candidates need to select the method that was inappropriate.

More specifically, the first part of Module 2 assesses the applicants' knowledge about identifying proper teaching objectives and interpret them into plans for a single lesson or series of lessons, arrange and order teaching activities for one lesson or following lessons which are appropriate to the students' needs and develop assessment activities which fit these lessons.

The second part of Module 2 is about selection and make use of resources and materials for language teaching, which comprises six tasks. As tabulated in Table 3.4, this part attempts to assess applicants' knowledge of teaching resources that they can use for planning a lesson.

Table 3.4.

Scope of Tasks in second part of TKT Module 2 (adapted from Teaching Knowledge Test, Module 2 Examination Report, 2007, pp.8-9)

Task No	Questions covered	Aim	Process
Task 7,	Questions 41-47	Focuses on candidates' ability to match books on language teaching to a topic area.	Candidates need to match book titles to topics representing a teacher's interests
Task 8,	Questions 48-55	Focuses on the selection of the syllabus that tests candidates' ability to consult reference sources to help in lesson preparation.	In this task, a dictionary is used as a reference source and candidates are required to match extracts from a dictionary entry to the information they provide.
Task 9,	Questions 56-61	Focuses on a methodology book and requires candidates to match the content of units from the book to unit headings.	In this task, candidates are required to recognise what aspects of a range of methodology topics are exemplified in the question.
Task 10	Questions 62-67	Focuses on ways of adapting materials	Here candidates are required to match teaching purposes to the ways a teacher can adapt a text to achieve these purposes.
Task 11	Questions 68-73	Focuses on the selection and use of teaching aids.	It requires candidates to match students' activities to learning aids.
Task 12	Questions 74-80	Focuses on the selection and use of supplementary materials and activities.	An odd-one-out task that requires candidates to look at a piece of supplementary material and decide on the suitability of various uses.

As in Module 2, TKT Module 3 also involves two parts consisting of 40 questions in each. The scope and tasks included in Module 3 are tabulated in Table 3.5.

Table 3.5.

Scope and Tasks of TKT Module 3 (adapted from Teaching Knowledge Test, Module 3 Examination Report, 2007, p.5)

	Description	Areas of teaching knowledge	Task types and format
Part 1	Teachers' and learners' language in the classroom	Using language appropriately for different classroom functions, e.g. – instructing – prompting learners – eliciting – conveying meaning of new language Identifying the functions of learners' language Categorising learners' mistakes	5 tasks consisting of approximately 40 questions Tasks include one-to-one matching; 3/4/5-option matching; 3-option multiple choice; odd-one-out and sequencing.
Part 2	Classroom management	Options available to the teacher for managing learners and their classroom in order to promote learning, e.g. – teacher roles – grouping students – correcting learners – giving feedback appropriate to learners and aims	5-6 tasks consisting of approximately 40 questions Tasks include one-to-one matching; 3/4/5-option matching; 3-option multiple choice and odd-one-out.

The first part of Module 3 assesses teachers' ability to understand the variation of language used in the classroom, and how a teacher can alter and adjust classroom language for the purpose of the lesson and to the level of students. It also attempts to evaluate candidates' knowledge of assessing teachers' language use in the classroom and interpret and classify errors and mistakes produced by the students. This part of module 3 contains 40 questions divided into 5 tasks. These tasks are one-to-one matching; 3/4/5-option matching; 3-option multiple choice; odd one out and sequencing related with the teacher's knowledge about classroom language used by

both teachers and students. The purpose and the process of the tasks are provided in the Table 3.6 below.

Table 3.6.

Scope of Tasks in the first Part of TKT Module 3 (adapted from Teaching Knowledge Test, Module 3 Examination Report, 2007, p.7)

Task No	Questions covered	Aim	Process
Task 1	Questions 1-8	Focuses on identifying the functions commonly used by the teacher in the classroom.	Candidates are required to match teachers' language to classroom purposes.
Task 2	Questions 9-16	Focuses on teacher's language use, specifically on its suitability and effectiveness for managing learning.	It requires candidates to match a teacher trainer's comments on a teacher's instructions to examples of the teacher instructions.
Task 3	Questions 17-23	Focuses on identifying the functions of language used by learners in the classroom.	An interaction extract is provided to test takers. They are asked to answer multiple-choice questions on words or phrases taken from the extract. This task involves analysis of language, which is not completely accurate.
Task 4	Questions 24-30	Focuses on the area of teacher instructions.	Candidates are required to match a teacher's instructions to the activities being carried out in class.
Task 5	Questions 31-40	Focuses on students' mistakes while writing and tests candidates ability to identify the kind of grammatical mistake	It is a four-option matching task in which options could be used more than once as answers.

In the second part of this module, there are again 40 questions scattered into 5 tasks which require candidates to do one-to-one matching; multiple-option matching; multiple choice and odd-one-out focusing on the teacher's classroom management skills. The tasks offer candidates options about the topics of managing learners and their classroom such as their roles, grouping learners for an activity, adjusting their mistakes, and providing feedback. Detailed information about the tasks in this section is presented in Table 3.7.

Table 3.7.

Scope of Tasks in second part of TKT Module 3 (adapted from Teaching Knowledge Test, Module 3 Examination Report, 2007, p.8)

Task No	Questions covered	Aim	Process
Task 6	Questions 41-46	Focuses on general issues in classroom management.	Candidates need to match solutions to classroom management problems such as students working slowly, showing a lack of interest, ignoring layout and presentation in their writing etc.
Task 7	Questions 47-56	Focuses on teacher knowledge related to the roles that a teacher has to play in the classroom.	It requires candidates to match the types of teaching knowledge with what the given teacher knows.
Task 8	Questions 57-64	Focuses on the opportunities provided to the teacher by different ways of interacting with students in class.	In this task, candidates are required to match the features of interaction patterns with the ways teacher interact with students.
Task 9	Questions 65-70	Focuses on correction strategies.	Candidates are asked to decide on the appropriateness of using particular strategies to correct mistakes in particular situations.

Task 10	Questions 71-80	Focusses on giving feedback.	It requires candidates to match learners' comments on different types of feedback with the type of feedback.
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In this section of Module 3, it is attempted to assess teachers' knowledge about the strategies which are necessary for managing classes efficiently. These strategies involve guiding interactions between and across students, adjusting the pace of the lesson, providing various activities and correcting students' speech mistakes. In addition to these, this section aims to assess teachers' roles which can be fulfilled throughout a lesson in an appropriate manner to the lesson's aims, and to the learners.

Qualitative data were gathered by several qualitative research tools, including video recordings of school lessons, video-stimulated recall sessions, and written reflections based on video stimulated recall sessions. In this way, it was endeavoured to maximize reliability. Detailed descriptions of the instruments are provided below.

3. 7. 3. Video recording of a lesson

The participants were required to videotape eight of their lesson plan implementations. A compact HDR video camera was placed on a tripod and set at the back of the class to videotape the pre-service teacher. The reason for locating the camera at the back of the class was to provide a wide angle for recording by particularly focusing on the teacher's acts and teaching and to minimise disruptions to students. The recording was done by a peer.

3. 7. 4. Video stimulated recall

Video-stimulated recall is a method in which teachers' practices are videotaped and then are used to assist teachers' recalling abilities concerning the performed lesson. It is utilized in educational research and professional development of teachers as it provides teachers with a vision for understanding their actions and perceptions about the teaching process in detail (Guichon, 2009; Cutrim Schmid, 2010, Reitano & Sim, 2010).

3.7.4.1. Stages of video recording and stimulated recall sessions

3.7.4.2. Stage 1: Preparation for teaching practice and videotaping the lesson

Pre-service teachers were assigned to specific teaching topics by their mentors and they prepared a detailed lesson plan using a common template. They were required to submit their lesson plan to their supervisor to get feedback and revise it. Then they implemented their daily plan at their assigned schools and a peer-videotaped their teaching performance.

3.7.4.3. Stage 2: Self-monitoring for the first emotional response

Following their teaching practice, pre-service teachers watched their performance on their own at home or some other convenient place for their first emotional response. At this stage, they needed to focus on the following question: "What features of your teaching do you focus on first? The purpose of this first self-viewing was to make the pre-service teachers focus on their appearance, posture, and grammatical and phonological accuracy. In this way, their following reflective practice could be contextual or dialectical critical rather than technical.

3.7.4.4. Stage 3: Repetitive self-monitoring and reflection after a period

It was essential to give a break between self-viewings to provide a better critical analysis of the teaching practice. In their second self-monitoring, pre-service teachers could have a critical look at their teaching behaviours, interaction with students, their classroom instruction, and classroom management skills. At this stage, participants were compelled to answer some written questions in which they raised their self-awareness and started to reflect critically. Questions were related with the problems they encountered or about their weak points in teaching. In the literature regarding reflective practice, Farrell (2004, p. 27) flagged the following primary questions to be reflected on by a teacher. These are;

1. What am I doing in the classroom?
2. Why am I doing this?
3. What is the result?
4. Will I change anything based on the information gathered from answering the first three questions?

Farrell's questions were expanded and some new questions which demanded participants to reflect on their own performance were provided for pre-service teachers. Some selected questions are given as examples below.

- Do you believe that you achieved the objectives of your lesson plan? If not, what would you like to change?
- Can you rate your ability of using multimedia technology?
- Can you comment on teacher talking time?

- Did you give comprehensible instructions?
- How would you react when you recognised that your students did not understand your instructions?
- Did you experience cases where your students switched the classroom language into Turkish as they could not express themselves in English?
- Can you reflect on the type of interaction used in the classroom?
- How would you react to the students who were not involved?

During implementation of the self-monitoring in the form of video recording and analysis, participants in the study group were assigned to do two video-stimulated recall sessions in the training session and six more in the study session. In each session, participants were required to answer some questions, examples of which are given above. These were in the form of assignments consisting of questions which require pre-service teachers to analyse and reflect on their lesson plans and their video recording performance. Therefore, each participant in the study group wrote reflective entries about their performances by considering the planning and preparation phase of their lesson plan and by concentrating on certain aspects of their practice such as instructions, time management, classroom management, and teacher's role. The entire data collected from the video-stimulated recall sessions constituted the main data source of the qualitative findings of the study; therefore, they were transferred to Maxqda12 software and used for the analysis of progress in terms of reflectivity and teacher knowledge. In this way, it was aimed to observe the effect of video-based self-monitoring activity on their reflectivity level and on their teacher knowledge.

3.7.4.5. Stage 4: Watching the video with peers and supervisor

In the planning of this stage, it was aimed that pre-service teachers would watch their teaching practice video with a peer and then they discuss the necessary suggestions that they would do in the previous stage. However, in the training sessions, most of the participants complained that watching the same video repeatedly was boring. One of the participants stated, “I learnt patience because watching a video again and again is a difficult job and I cannot concentrate on what I am watching”. This obviously led to a change in the process. Therefore, this stage was omitted.

3. 7. 5. Written reflections

The participants in the study group had training about the usage of video based self-monitoring in the fall semester of 2012-2013 academic year and implemented this reflective activity in the spring semester of 2012-2013 academic year. They were required to write eleven reflective entries throughout the training and study sessions. In all these reflective entries, they were requested to reflect on their performances by focusing on certain parts of each performance such as the effect of video recording and analysis on their lesson planning and implementation process, selecting and make use of resources process, their role as a teacher, their language use in the classroom, their approach to language teaching and their self-assessment. At the end of the study, these entries were classified into three categories based on their production time, namely outset, mid-phase, and final-phase. In this way, it was aimed to observe any shift in their reflectivity level and their teacher knowledge growth. Therefore, the data gathered through reflective entries were transferred to the analysis software and used for further analysis regarding change in their reflectivity level and the shift in their teacher knowledge. A sample of reflective entry is provided in Appendix F.

3. 8. Data Collection Procedure

The data of the study were gathered in two academic semesters. In the first one, training sessions were held. In the Fall Semester of the 2012-2013 academic year, the participants in the study group were trained on how to use video recording and analysis as a reflective activity. The purpose of training was to raise participants' awareness about self-monitoring, particularly video recording and analysis, and to teach them how to record their classroom performances and how to analyse them in a reflective way. In this way, it was aimed to familiarise the participants with the video recording and analysis process. Furthermore, it was also aimed to teach them the process of being reflective on their own actions. As it was going to be an experimental study, it was worth informing the participants in the study group what they were going to do in the following semester to set the preconditions of the study. In this way, participants in the study group would easily know what to focus on in their video-recorded performances and how to reflect on the incidents they would encounter on their videos.

With this aim in mind, the researcher and the participants in the study group met each week and discussed the steps of self-monitoring throughout the Fall Semester. The training sessions were initiated by assigning some articles and book chapters to read about the topic.

First, study group's participants were required to read the chapter titled "Self-Monitoring" published in Richards and Farrell (2005, p. 37) and reply to the questions provided within the vignettes in this section, such as "*Sergio used the video to monitor his error correction strategies, if you used a video, what topic or topics would you like to self-monitor?*" In these sections, there were some real-life stories of

teachers encountering problems in their classes and their suggestions by employing self-monitoring.

The following week, participants in the study group were handed an article about the procedures used in self-monitoring. They were also asked to answer some guided questions related with self-monitoring procedure such as: “*What aspects of a lesson would you be most interested in studying if you were to use a video recording of a lesson?*”, “*Do you think that video recording of a lesson can be used to assess a teacher’s teaching performance? Why or why not?*” The answers of the participants were discussed in the following session to cooperate and raise their awareness about the topic.

Next, participants in the study group were shown a video performance of a previous teacher candidate teaching at the practicum school. They were also required to comment on her performance by answering some guided questions such as “*Can you please analyse her instructions’ comprehensibility?*” and “*How did she respond to the students when they did not understand her instructions?*” In the following session, the video was watched together with the participants and they were required to comment on some weak and strong points of her teaching performance.

As the fourth assignment, study group’s participants were assigned an article titled “Video Recording as a Stimulus for Reflection in Pre-Service EFL Teacher Training” (Orlova, 2009) and they were instructed to answer the question attached to the appendix of the article since these questions were the baseline in their own future video analysis process. Some of the questions provided in this article were “*Was your use of gestures sufficient?*” and “*Did you observe any grammatical or pronunciation errors?*” (Orlova, 2009). Participants’ responses to the questions were discussed

together with the researcher in the following session in order to clarify how they were going to record their own teaching performance and comment on their teaching.

At the end of the theoretical training on self-monitoring in the form of video recording and analysis, participants in the study group were inquired to write a reflective entry about the use of video analysis as a self-monitoring activity on their professional growth, their experience of video self-recording, and the things that they wanted to analyse in their own video recordings. In this manner, it was targeted to reach their insights about video recording and analysis as a self-monitoring activity.

Since participants in the study group had read some articles and analysed the video recording of a previous teacher candidate, it was time to implement their own daily plans, record their performances, and comment on their actions as a teacher. In this process, the stages for video recording and stimulated recall sessions, described in section 3.7.4, were followed.

For the initial stage, they were required to design a lesson plan in pairs for a 40-minute lesson including reading, speaking, vocabulary, or listening practice. The daily plans of the participants were checked before they implemented it and necessary modifications were made. They prepared their technical devices for the video recording and they were told to check memory cards, batteries, and other related tools. Afterwards, each participant put into practice his or her daily plan at the assigned school. The schools designated for the school experience course were regular state high schools and teaching performances were carried out in the 9th and 10th grades. As participants were paired, they recorded each other by taking turns.

For the second stage, the participants were asked to watch their performance just for pleasure, just after they had finished their teaching practice. The reason for

this first self-viewing was to make the pre-service teachers focus on their appearance, posture, and grammatical and phonological accuracy rather than their teaching abilities.

For the third stage, they were requested to watch their performance two days later. This time they were provided with some questions in which they would reflect on their own performance. Some selected questions were:

1. Did the knowledge of recording yourself in teaching practice affect your lesson planning? If so, how?
2. Once you watched yourself in your first performance, what was your first reaction to your appearance as a teacher?
3. Do you consider yourself an effective teacher? Why, why not?

In the following session, one of their recordings was randomly chosen and watched together with the researcher for the purpose of Stage Four. In this way, the process of video recording and the difficulties they encountered were discussed and precautions and suggestions were deliberated in order not to repeat them in the subsequent performance. At the same time, pairs shared their comments on their friends' performance and exchanged information about self-monitoring. In these discussions, dialogic talk in which a series of viewpoints on a range of different points of view were debated and those accepted were used. 'Open' questions of How and Why were asked to explore participants' ideas. In this way, they could elaborate and justify their views. In other words, they could reflect on their practices critically.

For the final task of the training session, participants in the study group were required to design a 40-minute lesson plan for a full lesson in accordance with the topic of the curriculum. Their lesson plan was checked before their practice and

crucial changes were made. Necessary reminders about the video recording devices and process were given. Participants were recorded by his/her peer during their practice. Then, they were asked to watch their performance for pleasure initially and two days later, they were provided with some questions about their performance and they were required to reflect on their performance by employing stimulated-recall. Some selected questions of this task were provided below.

1. Did viewing your first performance influence the planning stage of your second performance? If so how? (For example, did you change your instructions, the materials that you use, or activities?)
2. Did you try to change some of your behaviours, which you considered weak in your first performance?
3. Did you observe any speech errors? (It can be a pronunciation error or a grammatical error)

In the subsequent session, they were shown a recording of themselves picked out randomly and asked to comment on the classroom management and instructions in general. In this way, it was aimed to have a consensus on their weak and strong points in the classroom and how and why they acted in a particular way; which was discussed in order to reach their insights about the topic.

At the end of the semester and the training sessions, it was decided that participants in the study group had learned how to monitor themselves by means of video recording and they were told that they would continue recording their performances in the teaching practice course and comment on them. Furthermore, they expressed that they found this activity beneficial for their professional development and had a desire to pursue the study. Pre-service EFL teachers stated that

they regarded this process not as a burden or fault-finding but as a valuable activity for their professional growth.

In contrast to the procedures followed by the participants in the study group, control group did not have any training about the use of self-monitoring and they followed the required procedures of the school experience. For the purposes of this course, each week they were required to do some observations and report their observation in a reflective portfolio. For example, in the second week, they did observation about a teacher's one day at school. They chose a teacher of English and observed him/her actions about his/her profession at school and they noted down how much time these teachers spent on these actions. Then they wrote down a report by using these notes. At another week, they observed teaching strategies used by language teachers and again report their observations by using their notes that they took down at that day. At the ninth week, they did observations about classroom management process by focusing each part of the lesson in detail and filled in a detailed form about the steps of a lesson. Later than they write down a reflective paper by considering the issues that they would want to change if they were the real teacher. Finally, they completed the course by doing a 15-20-minute lesson plan and implement it by following the procedures that they observed throughout the course.

In the Spring Semester of the 2012-2013 Academic year, the study was carried out. First, the Profile of the Reflective Thinking Attributes instrument (henceforth PRTA) and the Teaching Knowledge Test (henceforth TKT) were run as a pre-test before the implementation of the video-based self-monitoring. The use of PRTA was to evaluate changes in the pre-service EFL teachers perceived reflective thinking levels due to the implementation of video recording and analysis as a self-monitoring

activity. In addition to PRTA, TKT was applied to evaluate the relationship between pre-service teachers' teaching competencies regarding their teaching knowledge on the concepts (such as planning a lesson, selecting and utilising resources, teachers' language use in the classroom and classroom management) and the use of video-based self-monitoring activity. In February, both instruments were implemented with the study and control groups.

In March and April, the participants started teaching. A plan was designated by their mentors at the assigned practicum schools. In this process, stages for video recording and stimulated recall sessions were employed by the participants in the study group. Respectively, they designed their daily plans, presented them to the researcher for a final check, and then they implemented them. Their performance was recorded by their peers. First, they watched their video on their own twice, then they were required to watch their own performance with a peer and the researcher in which they would have a dialogic discussion about their performance. At this stage, a problem occurred. Watching the video with a peer and researcher took too much time and it was difficult to organise a schedule for 15 the participants as they had lessons on weekdays and private courses at the weekend. Therefore, the stage of watching the video with a peer and researcher was omitted from the study.

In this process, participants in the study group did six lesson plans and implemented these plans as macro teaching in the assigned classrooms. For each of their performance, they followed the procedures of video recording and reflected their performances by employing self-monitoring tool.

Based on the research questions of the study, participants reflected on their performances by focusing on certain parts of each performance, such as:

1. Planning and preparing a lesson
2. Selecting and utilising resources and materials
3. Teachers' language use in the classroom
4. Classroom management

In the final stage of the study, participants were required to answer some questions related to the effect of using self-monitoring in the form of video recording and analysis on their professional development. Through this reflective activity, it was aimed to assess the change in their reflectivity level and the shift in their teaching knowledge. Finally, PRTA and TKT were employed as a post-test to assess their output levels.

In contrast to the study group, participants in the control group followed the required procedures of teaching practice course. In particular, they spent 14 weeks at the assigned MoNE schools by doing observations about teaching and learning process in real classroom atmosphere and by putting their lesson plans into practice. In the first two weeks of the course, pre-service EFL teachers did observations which enabled them to be aware of classroom and school environment. In other words, it was a warm up session for pre-service teacher where they could meet with their students, teachers and the requirements of the course. The pre-service teachers could have collected information about the teaching methods and strategies that mentor teacher employed and this process raised their awareness about their professions. In addition, pre-service teachers in the control group were required to write reflections about their observations based on their memory. In the following weeks, they did lesson plans, checked their lesson plans with their supervisor and then implemented these plans at real classrooms. In this process, they observed their peers and wrote

reflective comments about these performances and assess their friends' performances by using some ready-made checklists. In addition, they got feedback from their mentors at the assigned schools and reflected their own performances as well.

The overall process of data collection procedures and timeline for both the training and study sections are tabulated briefly in the tables 3.8 and 3.9 below.

Table 3.8

Data Collection Timeline and Procedures (Training)

Participants	Fall Semester			
	September	October	November	December
Study Group	No Data was collected	Training (reading articles and watching a sample video)	Single Lesson-Planning in pairs and micro teaching (reflected on their performances by video analysis individually and collaboratively)	Single lesson-Planning and macro teaching (reflected on their performances by video analysis individually and collaboratively)
Control Group	They followed the required procedures of the school experience course. They prepared a portfolio consisting of observation reports.			

Table 3.9

Data Collection Timeline and Procedures (Study)

Participants	Spring Semester			
	February	March	April	May
Study Group	Application of RTAI and TKT as a pre-test	3 Lesson planning and macro teaching (reflected on their performances by	3 Lesson planning and macro teaching (reflected on their performances by	Application of RTAI and TKT as a post-test

	No lecturing or no video recording	video analysis individually by focusing on certain aspects of their teaching)	video analysis individually by focusing on certain aspects of their teaching)	1 exit entry based on the whole process
Control Group	Application of RTAI and TKT as a pre-test	They followed the required procedures of teaching practice course and they prepared a portfolio which included all the lesson plans and class material they prepared, all assigned task sheets, observation reports, and reports.		Application of RTAI and TKT as a post-test

3. 9. Data Analysis Procedures

Data analysis is one of the most significant stages of research as the core findings of the study starts to appear by employing various analysis techniques. In the data analysis process, both quantitative and qualitative techniques were employed. For the quantitative analysis, IBM SPSS Statistics 21 programme was utilised. For the statistical analysis of the data, non-parametric tests were applied, as the sample size was small. Table 3.10 below briefly shows the data analysis procedures followed for each instrument.

Table 3.10

Data Analysis Procedures

Instrument	Statistical analysis	Objective
The Profile of Reflective Thinking Attributes	Wilcoxon Signed Rank Test Mann-Whitney U Test	To provide a response to the first research question which refers to the effect of self-monitoring in the form of video recording and analysis on pre-service teachers' reflectivity levels within the group and between the groups

The Teaching Knowledge Test	Wilcoxon Signed Rank Test Mann-Whitney U Test	To find if there are any effects of the video based self-monitoring on pre-service EFL teachers' teaching knowledge focused on in the second research question
Written reflections based on video analysis	Content Analysis (using the Rubric of Reflective Thinking Levels by Taggart and Wilson, 1998)	Explore patterns to see whether there is a change in the level of reflectivity.
Written reflections based on video analysis	Content Analysis (Open coding by Corbin & Strauss, 2008)	Explore the patterns to find out the shift in teachers' knowledge regarding planning and preparing a lesson, selecting and utilising teaching resources, teachers' language use and classroom management

3.9.1 Data analysis of quantitative data

The quantitative data related to both research questions were gathered by means of The Profile of Reflective Thinking Attributes instrument (PRTA) and Teaching Knowledge Test (TKT).

For analysis of the reflectivity levels of the participants, the classification provided by Taggart and Wilson (1998) was employed. The PRTA Instrument attempts to assess the reflectivity level of the participants in three categories. These categories are: Technical Level, Contextual Level and Dialectical Level, based on the calculation of participants' scores on this instrument. The score range of the instrument is from 30 to 120. The categorisation range for the reflectivity levels is shown below (Taggart & Wilson, 1998, p. 47).

- Technical Level: Scores below 75
- Contextual Level: Scores from 76 to 104
- Dialectical Level: Scores from 105 to 120

Firstly, the raw scores were calculated and then these scores were categorised according to the range of reflectivity levels provided above. Following this, Wilcoxon Signed Ranks Test, a non-parametric statistical analysis, was employed in order to explore changes in the pre-test and post-test scores of both groups' reflectivity levels. This statistical analysis tool is a non-parametric alternative to the t-test used in research design to compare two related samples or a repeated measure on a single sample with pre-test and post-tests when the use of t-test is not appropriate for dependent samples (Hinkle, Wiersma, & Jurs, 1998). It offers more power than parametric methods when the sample size is too small to yield a normal distribution or homogeneity of variance, or with data that is non-continuous, as with an ordinal scale (Conover, 1999).

Furthermore, another non-parametric test, Mann-Whitney U, was run to determine the effect of the independent variable, self-monitoring, on pre-service teachers' reflectivity levels. It was used to assess the presence of any statistically significant differences in the reflectivity levels of the pre-service teachers who participated the study in the control and study groups. Glass and Hopkins (1996, p. 303) state that the Mann-Whitney U test evaluates the hypothesis that "two independent groups have been drawn from the same population" and that "no assumptions are made about the shape of the parent populations: there is no normality assumption". In this study, the alpha or level of significance to determine whether the test result is statistically significant or not is $p < .05$.

For analysis of the teaching knowledge, the grading provided by Teaching Knowledge Test (TKT) was used. Each of the TKT modules used in the study (Module 2 and Module 3) has 80 questions. In the calculation of the overall scores, each question has one point, therefore the maximum score one can get from each module is 80 points. First, the overall scores of the participants in both groups from each module were calculated. Then, the non-parametric statistical analysis of Wilcoxon Signed Ranks Test was employed to explore the shift between the pre-test and post-test scores of the control and study groups' TKT scores for each module. In addition, Mann-Whitney U Test, which is a non-parametric version of t-test, was utilised to compare the scores of the participants in both control and study group. This test is particularly used to test the difference between the medians of two independent samples when the distributions of the samples are not normal.

3.9.2. Data analysis of qualitative data

3.9.2.1. Qualitative data analysis software

Qualitative data management can be an extremely discouraging work for researchers as the data is voluminous. Computer assisted qualitative data analysis (CAQDAS) programmes have been popularised recently as they enable researchers to break down the raw data into manageable parts. There are many popular CAQDAS packages on the market. In the analysis of the qualitative data for this study, the computer-assisted qualitative data analysis software MAXQDA 12 was used as it enabled the researcher to input, evaluate, and interpret the qualitative data easily. In her article comparing MAXQDA and NVivo, Kuş Saillard (2011) stated that the former motivated her much as had an easy and interactive design. She concluded that MAXQDA functions better than NVivo in assisting analysis of the inter-relationship

between the data, code, and memo. Furthermore, it allows two or more researchers to work on the same data for triangulation issues.

3.9.2.2. Qualitative data analysis procedure

Qualitative data analysis was conducted two dimensionally. In the first dimension, an inductive approach to data analysis was employed. The Constant Comparative Method, which was deduced from grounded theory (Glaser & Strauss, 1967; Strauss & Corbin, 1990), was used to conduct the inductive analyses of the qualitative data about the shift in participants' reflectivity level and their teaching knowledge. This method offers researchers a clear path for analysing extensive amount of data in a way that is both challenging and informative. It enables researchers to create their own pattern based on their interpretations by coding and classifying occurring themes according to their relevance and importance and therefore connecting any useful data, rather than implementing a pre-determined categorisation (Bogdan and Biklen, 1998). Professional Software for Qualitative & Mixed Methods Research MAXQDA 12 was used to code the data. After the preliminary coding, the data were repurposed to identify the emerging subtopics for each domain. The data were reviewed several times to check issues consistently raised by participants. Then, these codes formed the categories. All these processes were conducted by the researcher and a colleague to test inter-rater reliability. Furthermore, the researchers looked for negative cases that contradicted sub-codes, and they adjusted the categories and recoded the data if there were negative cases. Finally, a list of categories and codes was created. The inter-rater reliability was analysed by the help of software MAXQDA12.

The second dimension of qualitative data analysis includes a deductive approach. Berg (2001) states that the use of the results of previous studies for forming the themes or variables for a study is beneficial for qualitative analysis, particularly at the outset of the study. For the qualitative analysis of the shift in the reflectivity level of the participants, the classification provided by Taggart and Wilson (1998, 2005) was used as a deductive approach. Even though there are various classifications mentioned in the related literature about teacher reflectivity, the Taggart and Wilson (1998, 2005) rubric was used in the qualitative analysis as it provided a 100% match between the quantitative and qualitative analysis. Therefore, their template (see Table 3.11) was utilised in order not to lead any misconceptions.

3.9.2.3. Written reflections

In this study, the participants in the study group wrote eleven reflective entries. These entries were grouped as the outset, mid-phase, and final-phase. The entries about the effect of the self-monitoring usage on participants' reflectivity level were analysed to observe the possible change that had occurred throughout the study. In the analysis of the data collected by written reflections regarding the shift in the reflectivity level of pre-service EFL teachers, the framework proposed by Taggart and Wilson (2005) was employed for the deductive level analysis.

At the first step of data analysis, all the written reflections were transferred into the software MAXQDA 12 and analysed by employing open coding. In this process, the researcher tried to "break down, examine, compare, conceptualize, and categorize the data" (Strauss and Corbin, 1990, p.62). Once the data was read, participants' comments on a particular theme or topic were coded as technical,

contextual, or dialectical in line with the rubric of Reflective Thinking Levels provided in Table 3.11 and in Appendix C.

Table 3.11

Rubric of Reflective Thinking Levels by Taggart and Wilson (1998, 2005)

Level of Reflection	Characteristics
Technical Level	<ul style="list-style-type: none"> ✓ Make simple descriptions of observations ✓ Focus on behaviours, content, and skills from experiences or theory derived from readings or course work, without looking for alternatives ✓ Are task oriented, viewing teaching competency as meeting a set of objectives. ✓ Use appropriate educational vocabulary to correspond with current skill and pedagogy level
Contextual Level	<ul style="list-style-type: none"> ✓ Reflect on practices as those practices affect students' learning ✓ Reflect on decisions relative to the context of the situation ✓ Reflect on content related to student needs ✓ Relate theory to practice ✓ Focus on action ✓ Look for alternatives to practice based on knowledge and personal values ✓ Analyse, clarify, and validate practices/principles based on sound teaching constructs ✓ Assess implications and consequences of actions and beliefs ✓ Clarification of assumptions and predispositions of practice and consequences
Dialectical Level (critical reflection)	<ul style="list-style-type: none"> ✓ Systematically question practices ✓ Suggest alternatives and competing theories ✓ Reflect on decisions and consequences during the course of the action ✓ Contemplate moral, ethical, and socio-political issues relative to instructional planning and implementation ✓ Express themselves verbally and in their writing with efficacy and self-confidence

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- ✓ Reconstruct action situations as a means for reviewing self-as-teacher
 - ✓ Examination of contradictions and systematic attempts to resolve issues
 - ✓ Achieve disciplined inquiry, individual autonomy, self-understanding, and self-actualization
-

(adapted from Taggart and Wilson, 1998, 2005)

As there is no predetermined template for the categories regarding the change in teacher knowledge, the concepts in the second research question such as planning and preparing a lesson, selecting and utilising teaching materials and teacher's language use and classroom management were used to narrow the scope of the study. In an inductive way, the researcher primarily read the raw data several times to derive codes and categories of teaching knowledge growth by following the process of open coding. In this process, initially the codes related to the concepts mentioned in the second research question were designated. The researcher double-checked the codes and irrelevant data were excluded to minimize the bulk of data, which is seen as the main function of coding in a qualitative study (Dörnyei, 2007, p. 250). Then, these codes were assigned to the categories and these categories formed the theme of teaching knowledge.

3.9.2.4. Inter-rater reliability issue for designating reflectivity levels

A colleague with experience in qualitative research was asked to code the reflective entries regarding reflectivity levels to ensure inter-rater reliability. As the process of data analysis is voluminous, 50% of the documents were coded by the colleague. Prior to coding, one of the documents was analysed together to negotiate the criteria and agree on the type of sentences that needed to be included under each

criterion. The inter-rater reliability of the coding dimensions was assessed by the Maxqda12 software and found to be 88%, which indicated high reliability.

Reflective entries as incidences of different reflectivity levels at the outset of the study were compared with those occurring in the middle of the study and the last phase of the study to observe the shift across reflectivity levels. In this way, the change became visible and it provided a general outline of the change that had occurred throughout the study. Quotations from the participants' statements were excerpted in which the shift in their reflectivity level could be recognised. These excerpts were used to assist the quantitative findings, which signalled a shift in the reflectivity level due to implementation of the self-monitoring activity.

3.9.2.5. Inter-rater reliability issue for designating teacher knowledge

For the inter-rater reliability of the codes and categories about teaching knowledge, the procedures followed for the first research question were also employed at this stage and it was concluded that 86% agreement was reached on the codes and categories. The slight differences in the selection codes were discussed and agreed.

3.10. Summary of Methodology

This chapter provides complete information about the research methodology procedures employed to investigate the effect of self-monitoring activity on pre-service teachers' reflectivity level and teaching competencies. It first introduced the research design and the rationale for employing it. Then it comprehensively described the setting, participants, and sampling method. Since convergent parallel design was employed in the study, both quantitative and qualitative data collection instruments, the

procedures for data collection and analysis were explained in detail. A brief outline of the procedure employed as the research methodology for each research question is tabulated in Table 3.12.

The next chapter presents the findings of the study obtained from the analysis procedures described in this section regarding each research question, in two separate sections.



Table 3.12.

Overview of Research Questions and Corresponding Procedure

Research Questions	Data Collection Instrument	Data Analysis
1. Does the implementation of video-based self-monitoring have an effect on the reflectivity level of pre-service EFL teachers?	The Profile of Reflective Thinking Attributes Written Reflections based on video analysis	Wilcoxon Signed Rank Test Analysis of covariance (ANCOVA) Mann-Whitney U Test Content Analysis (Reflectivity Criteria of Taggart and Wilson) Content Analysis (open-coding by Corbin & Strauss, 2008) Inter-Rater Reliability Check via MAXQDA 12
2. Does the use of video-based self-monitoring have an effect on the competencies of pre-service EFL teachers in terms of their knowledge on the following concepts; a) Planning and preparing a lesson b) Selecting and utilising resources and materials c) Teachers' language use in the classroom d) Classroom management If so... How?	The Teaching Knowledge Test Written Reflections based on video analysis	Wilcoxon Signed Rank Test Mann-Whitney U Test Content Analysis (open-coding by Corbin & Strauss, 2008) Inter-Rater Reliability Check via MAXQDA 12

CHAPTER 4

RESULTS

4.1. Introduction

The study aimed to explore the effects of the self-monitoring activity employed as video recording and analysis in a pre-service EFL teacher education context on pre-service teachers' professional development regarding their reflectivity levels and their knowledge in terms of planning and preparing a lesson, selecting and utilising language teaching resources, teachers' language use in the classroom and the use of skills and strategies about classroom management. Therefore, the study attempted to answer the following two research questions.

1. Does the implementation of video based self-monitoring have an effect on the reflectivity level of pre-service EFL teachers?

2. Does the use of video based self-monitoring have an effect on the competencies of pre-service EFL teachers in terms their knowledge on the following concepts:

- a) Planning and preparing a lesson
- b) Selecting and utilising resources and materials
- c) Teachers' language use in the classroom
- d) Classroom management

If so... How?

The first question concerns the impact of video recording and analysis as a self-monitoring activity on pre-service teachers' reflectivity levels and the second is about the influence of video recording and analysis as a self-monitoring tool on pre-

service teachers' teaching competencies. Both quantitative and qualitative data analysis methods were utilised to determine answers to the two research questions. This chapter, therefore, presents the findings of each research question in two separate sections.

4.2. Findings Related to the First Research Question

RQ1. Does the implementation of video based self-monitoring have an effect on the reflectivity level of pre-service EFL teachers?

One of the main aims of this study was to assess the influence of self-monitoring usage on the reflectivity level of pre-service EFL teachers. Therefore, the PRTA instrument was administered twice as a pre-test and post-test to both groups to assess the shift in the reflectivity level of pre-service EFL teachers as a result of treatment. In addition to the quantitative data on reflectivity change, participants in the study group were also required to write eleven reflective entries about use of video as a self-reflection tool based on their real class performances to gather qualitative data. The results of the analysis start with the quantitative data and followed by the qualitative data.

4.2.1 Descriptive analysis of the reflective thinking attributes instrument for study and control groups

In the tables 4.1 and 4.2 below, descriptive analysis of the reflective thinking instrument related to the study and control groups are presented. The tables demonstrate the shift in the reflectivity levels of pre-service EFL teachers in both groups before and after the implementation of the self-monitoring in the form of video recording and analysis. Table 4.1 particularly presents the change in the reflectivity

level of the pre-service teachers in the study group. Before the implementation of the self-monitoring activity in the form of video analysis, pre-service teachers in the study group reflected at the contextual level with a mean of 98.27 and with a standard deviation of 5.25. The results conclude that all participants were above the lowest (technical) level in which they mostly depended on past individual experiences to meet the desired outcomes. In other words, they had the ability of being aware of their behaviours and looked for alternative ways for problem solving in a classroom environment. This might be a result of reflective work done in their previous lessons.

Table 4.1

Reflective Thinking Levels of Pre-Service EFL Teachers in Study Group before and after Implementation of Self-Monitoring Activity

	Technical Level	Contextual Level	Dialectical Level	Reflective Thinking Levels	
	N	N	N	M	SD
Before Practice	0	15	0	98.27	5.25
After Practice	0	1	14	108.73	3.10

The descriptive results in table 4.1 state that there is an augmentation in the mean scores of the pre-service teachers in the study group. After engaging with reflective activities during teaching practice course, 14 of the participants enhanced their reflective thinking skills from contextual to dialectical level reporting a mean of 108.73 with a standard deviation of 3.10. Only one participant remained in the same contextual level. The difference between the means of before and after practice scores is 10.46 which could be asserted that participants' overall perception of reflectivity increased due to the exposure of self-monitoring activity usage.

Table 4.2 presents the results of perceived individual scores of the participants in the study group. Fourteen of the participants, who previously were at the contextual level, stepped forward to the dialectic level with an increased score ranging from 5 to 17 points but one of them remained at the same contextual level even though she made a progress of 15 points. Apart from the level change, all the participants' reflectivity levels improved in a positive way.

Table 4.2

Individual Scores of Study Group Regarding the Pre and Post-Practice Scores of Their Reflectivity Level

Participant	Pre-Practice	Level	Post- Practice	Level	Difference
P1	104	Contextual	114	Dialectic	10
P2	101	Contextual	110	Dialectic	9
P3	96	Contextual	107	Dialectic	9
P4	87	Contextual	102	Contextual	15
P5	104	Contextual	112	Dialectic	8
P6	90	Contextual	107	Dialectic	17
P7	104	Contextual	109	Dialectic	5
P8	97	Contextual	112	Dialectic	15
P9	99	Contextual	111	Dialectic	12
P10	104	Contextual	110	Dialectic	6
P11	100	Contextual	106	Dialectic	6
P12	100	Contextual	110	Dialectic	10
P13	92	Contextual	105	Dialectic	13
P14	98	Contextual	107	Dialectic	9
P15	98	Contextual	109	Dialectic	11
Mean	98.26		108.73		10.46

Descriptive results presented in table 4.1 and 4.2 reveal that all pre-service EFL teachers in the study group improved their reflectivity level after engaging in self-monitoring activity in the form of video analysis.

As there was a control group in the design of the study, the PRTA instrument was administered to the control group to test the effect of self-monitoring activity use in the form of video analysis on pre-service EFL teachers' reflectivity level. Table 4.3 presents the results regarding the reflective thinking level of pre-service EFL teachers in control group before and after the teaching practice course. The participants in the control group were not provided any training about video based self-monitoring or exposed to any video-based activities related with reflective thinking and they only followed the routine requirements of the teaching practice course. However, the routine requirements required them to write reflective papers about their performances not based on video recording but on their memories. The results indicate that all the participants in the control group reflected at the contextual level in the beginning of the teaching practice course with a mean score of 91.80 and with a standard deviation of 5.79. This result is comparable with score of the study group, so it can be concluded that the pre-service EFL teachers already passed the initial level of reflective thinking as described by Taggart and Wilson. They became more concerned with their students and planning and implementation process of teaching. In other words, they were at the second level of hierarchical rank.

Table 4.3

Reflective Thinking Levels of the Pre-Service EFL Teachers in Control Group before and after Implementation of Self-Monitoring Activity

Technical Level	Contextual Level	Dialectical Level	Reflective Thinking Levels
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	N	N	N	M	SD
Before Practice	0	15	0	91.80	5.79
After Practice	1	13	1	94.87	9.02

According to the descriptive results in Table 4.3, there is a slight difference between participants' pre and post-practice scores. The shift in their reflectivity level before and after teaching practice course is 3.06. Almost all of the participants in the control group remained in the same level. In other words, the increase in their reflectivity level is not enough to reach the next level of reflectivity.

In addition to the overall mean difference, Table 4.4 presents the individual scores of the participants in the control group regarding the shift in their reflectivity level. Even though 12 of the participants made a positive progress in their reflectivity level ranging from 1 to 10, this change enabled a level shift only for one participant. Furthermore, post-practice score of the two pre-service EFL teachers decreased and this negative change led to a level shift from Contextual level to Technical level in one of the participants' reflectivity level. One of the participants reflectivity level did not change and the level of the two only improved 1 points.

Table 4.4

Individual Scores of Control Group Regarding the Pre and Post-Practice Scores of Their Reflectivity Level

Participant	Pre-Practice	Level	Post- Practice	Level	Difference
P1	87	Contextual	94	Contextual	7
P2	87	Contextual	93	Contextual	6
P3	87	Contextual	96	Contextual	9
P4	93	Contextual	101	Contextual	8
P5	92	Contextual	70	Technical	-22
P6	97	Contextual	102	Contextual	5

P7	93	Contextual	98	Contextual	5
P8	97	Contextual	94	Contextual	-3
P9	87	Contextual	97	Contextual	10
P10	96	Contextual	97	Contextual	1
P11	83	Contextual	88	Contextual	5
P12	97	Contextual	102	Contextual	5
P13	83	Contextual	83	Contextual	0
P14	96	Contextual	105	Dialectic	9
P15	102	Contextual	103	Contextual	1
Mean	91.26		94.86		3.06

Descriptive results regarding the shift in the reflectivity level of the participants in the control group conclude that teaching practice course had a negligible impact on pre-service EFL teachers' reflectivity level.

For a better understanding the shift in the reflectivity level of both groups, table 4.5 demonstrates the mean differences between the pre-practice and post-practice of both groups.

Table 4.5

The Shift in the Reflectivity Level of Both Groups Before and After Teaching Practice Course

Groups	Before Practice	After Practice	Mean Difference
Study	98.27	108.73	10.46
Control	91.80	94.87	3.06

Teaching practice course naturally creates a venue for pre-service teachers to improve their abilities about reflectivity as they are exposed to real classroom teaching. They, therefore, initiated forming their routines about teaching profession.

However, the shift can happen in a slow manner as there is a hierarchical order among the reflectivity levels. It can be perceived from the table 4.5 that participants in both groups improved their reflectivity level, but the study groups' reflectivity improvement was more than the control group and this improvement could be attached to the implementation of self-monitoring activity in the form of video analysis.

An illustration of the overall shift in the reflectivity level between the research groups can provide us better understanding of the difference between the groups.

Figure 4.1 demonstrates the shift between groups.

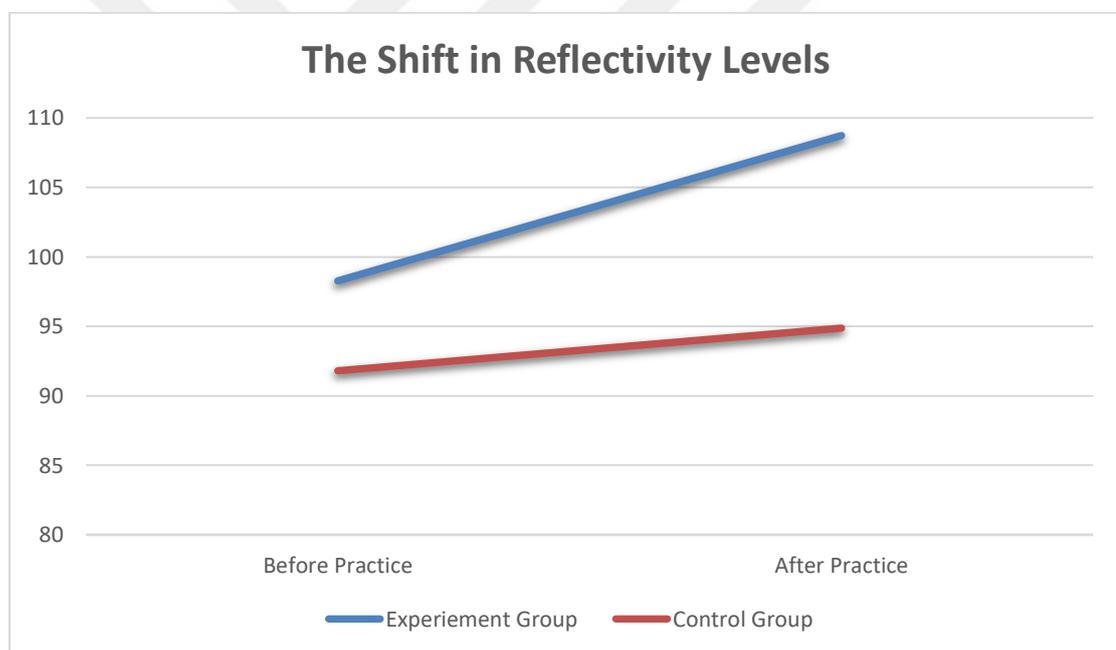


Figure 4.1. The overall shift in the reflectivity levels

In addition to the descriptive results, a non-parametric statistical analysis of Wilcoxon Signed Ranks Test was employed to detect whether the change in the reflectivity level of the participants within the groups was statistically significant or not. The test was conducted at the significance level of alpha .05. Table 4.6 presents

the test results for Reflective Thinking Attributes Instrument before the practice and after the practice for the pre-service teachers in the study group.

Table 4.6

The Results of the Wilcoxon Signed-Rank Test for Study Group Regarding the Pre and Post-Practice Scores of Their Reflectivity Level

Pre-test-Post test scores	n	Ranking Mean	Ranking Total	z	p
Positive rank	15	8.00	120.00	-3.412*	.001
Negative rank	0				
Equal	0				

*Based on negative ranking

As can be clearly observed in the table 4.6, all the participants had higher scores after the employment of video recording and analysis as a self-monitoring tool. The test results indicate that the shift between the pre-test and post-test scores of the participants in the study group was statistically significant ($z = -3.41, p < .01$). The findings indicate that the use of self-monitoring activity in the form of video analysis improved the pre-service teachers' reflectivity level in a positive way.

In comparison with the study group, the scores of the pre-service teachers in the control group were also computed with Wilcoxon Signed Ranks Test. The results are demonstrated in table 4.7 below.

Table 4.7

The Results of the Wilcoxon Signed-Rank Test for Control Group Regarding the Pre and Post-Practice Scores of Their Reflectivity Level

Pre-test-Post test scores	n	Ranking Mean	Ranking Total	z	p
Positive rank	12	7.33	88.00	-2.235*	.025
Negative rank	2	8.50	17.00		

*Based on negative ranking

The results regarding the reflectivity change in the control group indicate that 12 of the participants improved their scores but 2 of them had lower scores in the post-test and one of the participant's score did not change. Furthermore, the test results conclude the difference between pre-test and post-test scores was statistically significant when the p value is considered at .05 level ($z = -2.23$, $p < .02$). However, the shift in the reflectivity level of the study group was statistically more improved.

In addition to the non-parametric analysis, a crosscheck is necessary for the analysis of post test scores since a difference was observed between the pre-test scores of both groups in the analysis of the descriptive results. Even though the range of both groups scores referred to same reflectivity level which is the contextual level according to the classification of Taggart and Wilson (1998), an analysis of covariance (ANCOVA) procedure was conducted to determine whether there was still a statistically significant difference between post-test scores of both groups by controlling the pre-test scores. In other words, pre-test was assumed as a co-variant which might influence the effect of video recording and analysis as a self-monitoring tool over the post test scores of both groups. The reason of using pre-test score as a covariate is to reduce the error of variance. Although this process is mostly suitable for parametric statistics which consider the sample size, there is no non-parametric equivalent of this test.

Before running ANCOVA on SPSS, some assumptions, required by the procedure, were tested. It was found that homogeneity of variance [$F = 4.195$, $df_1 = 1$, $df_2 = 28$, $p = 0.051 > 0.05$] and homogeneity of regression slopes [$F(1, 26) = .717$,

$p=0.405>0.05$] met the assumptions of running ANCOVA. The adjusted means of post test scores based on pre-test scores are demonstrated in table 4.8.

Table 4.8

Adjusted Means of Both Groups' Post Test Scores

Group	N	Means	Adjusted Means
Study	15	108.73	106.67
Control	15	94.87	96.92

It can be observed that the adjusted scores of the post test for both groups differed from the first calculation. The post-test means of study group decreased from 108.73 to 106.67 and the post post-test means for control group increased from 94.87 to 96.92. Even though there is a shift in the adjusted means, there is still a difference between the post test scores. In other words, the adjusted score of the study group is still higher than the adjusted score of control group. Therefore, ANCOVA procedure was conducted to test whether this difference was statistically significant or not. The findings of the analysis are tabulated in the table 4.09 below.

Table 4.9

Ancova Results of Both Groups' Post Test Scores

Source	SS	df	MS	F	p
Pre-test	348.574	1	348.574	10.163	0.004
Group	521.288	1	521.288	15.198	0.001
Error	926.092	27	34.300		

The findings of the analysis of covariance state that there was an influential effect of this activity on pre-service teachers' reflectivity levels after controlling their pre-test scores regarding their reflectivity level at the outset of the study [$F(1,27) =$

15.198, $p=0.001>0.05$]. In other words, the difference between the pre-test scores of both groups cannot be considered as an effective factor on the post-test scores.

Furthermore, a non-parametric test, Mann Whitney U-Test, was applied to assess whether there was a significant difference between the post test scores of the participants in the study and control group. Table 4.10 below presents the results of this test.

Table 4.10

The Results of The Mann-Whitney U Test for Post-Test Scores of Both Groups

Groups	N	Mean Rank	Sum of Means Rank	U	p
Study	15	22.77	341.50	3.50	.000
Control	15	8.23	123.50		

The results of analysis indicate that post test scores of the participants in the study group were significantly more developed than the post test scores of the participants in the control group at the end of the study ($U=3.500$, $p<.05$). It can be interpreted that the use of self-monitoring activity in the form of video analysis led pre-service EFL teachers to become better reflective practitioners.

4.2.2 Analysis of written reflections about the shift in the reflectivity level of the participants.

In the section above, quantitative results associated with the shift in the reflectivity level of the participants in the study group due to the implementation of the self-monitoring activity in the form of video analysis reveal the positive effect of activity usage on participants' reflectivity level. However, the only use of quantitative research methods for understanding the phenomena in social studies is not

satisfactory. As convergent parallel design was employed in the study, there is a need to analyse the collected data through qualitative research techniques to interpret the quantitative results of the study.

Therefore, the qualitative data gathered from study group analysed to find out support for the quantitative results. Throughout the study, participants were required to write eleven written entries. In the training sessions, four reflective entries were written regarding the use of self-monitoring activity in the form of video recording and analysis. However, the first two of them were not based on their video recording and their reflections were originated from situations given in readings. Therefore, these reflective entries were excluded from the data analysis about the effect of self-monitoring. The remaining nine entries were divided into three sections as the first three entries were accepted as the outset data, the next three entries were considered as the data in the mid-phase, and the last three was labelled as the post line data. In this way, the effect of self-monitoring usage in the form of video analysis and the shift in the reflectivity level of the participants could be observed. The framework proposed by Taggart and Wilson (2005) was applied to label the reflectivity level of the participants. According to Taggart and Wilson (2005), reflectivity thinking can be observed in three levels namely technical, contextual, and dialectical levels. Therefore, participants' comments on a particular theme or topic were labelled as technical, contextual, or dialectical consistent with the Rubric of Reflective Thinking Levels (see Table 3.11).

Quantitative results proclaimed that all the participants in the study group were at the contextual level before the implementation of the self-monitoring in the form of video recording and analysis. However, the analysis of the qualitative data concerning the reflectivity levels of the participants at the outset of the study revealed somewhat

different results. In the following table, the reflectivity levels of the participants in the beginning of the study are demonstrated.

Table 4.11

Reflectivity Levels of the Pre-Service EFL Teachers in Study Group at the Outset of the Study

Level of Reflectivity	Frequency
Technical Level	66
Contextual Level	37
Dialectical Level	0
Total	103

As it can be observed in the table 4.11, the participants' deeper feeling about the context and their reflectivity level was largely at the technical level (66) as it is the most frequent one. However, the quantitative results state that the participants' reflectivity level was contextual at the beginning of the study. The rationale of the difference in qualitative and quantitative findings could be explained as some of the entries referred to their reflectivity level during the training section and participants could improve their reflective thinking level during the training session as Taggart and Wilson (2005) assert that there is a hierarchical relation among the reflectivity levels which is described in their reflectivity pyramid. As they describe, technical level is the one at the bottom of the pyramid. The frequency of the contextual level was 37, which was a remarkable result, when it was compared to the frequency of the technical level. The most important result is that none of the participants had the reflectivity level of dialectical indicating that the participants did not have any critical reflection ability in the beginning of the study and this finding could provide support for the quantitative results.

The following figure, which illustrates the situation in percentages, can provide a clear understanding of the participants' reflectivity levels in the beginning of the study. Among the reflective entries written in the first three entries, 64.08 % of them referred to technical level. As the participants were pre-service teachers, their routines for teaching had been still developing and that is why they tried to make simple descriptions of observations or they just reflected on isolated incidents that were disconnected from problem solving. Nevertheless, the contextual reflectivity level in the beginning of the study was 35.92%, which indicated pre-service teachers began to search for alternatives or solutions to various classroom-based problems. As they were still in the beginning of their teaching career, it was natural not to produce any dialectical level of reflection.

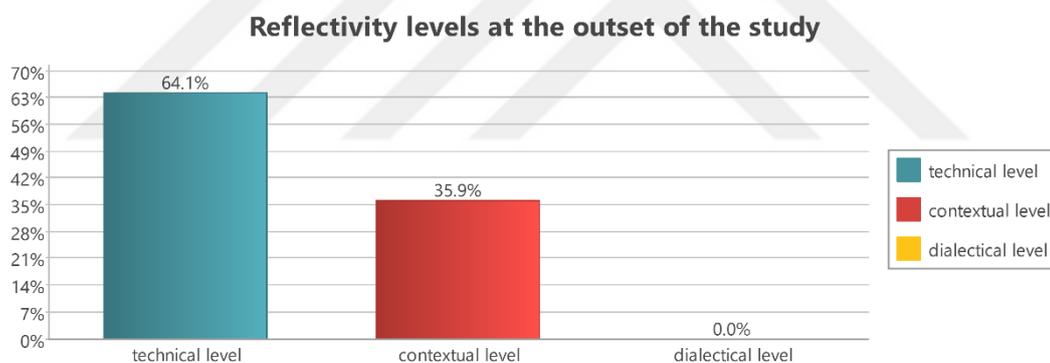


Figure 4.2. The reflectivity level of the participants at the outset of the study

Once the reflective entries written at the outset of the study were analysed, the participants producing technical level reflection were mostly concerned with their appearance, time management, flow of the lesson, lesson planning, and material choose, use of voice, interaction, and classroom management issues. In the following excerpts, their technical level of reflectivity was obvious as they only focused on making simple descriptions of the problems they encountered in class.

Excerpt 1: I stated the topic of the lesson and the activities clearly. My instructions were not complicated, and they were directly related with the aim of the activity. I think, it was so natural, and it was an effective way of establishing report. I used good classroom speech. When I watched my second performance, I realised that I supported my speeches with my mimic and gestures. (Study Group, Male P 12, second reflective entry)

Excerpt 2: Almost everything went well during the lesson. Firstly, the relationship I had with the students was quite good. We understood each other, and they were both good at English and relationship. They made some jokes, we laughed all together, teaching process was good also, and they got what I planned as a topic of the lesson. While doing exercises, almost all of them answered the questions correctly. So, again; almost everything went well. (Study Group, Male P 3, third reflective entry)

The extracts above are typical examples of technical level of reflectivity. In the beginning of the study, the participants tended to reflect on their own actions at the surface level, which could be described as technical level according to Taggart and Wilson. Research on reflectivity level can suggest the idea of being at technical level is a characteristic of novice teachers as they have fewer practical experiences in classroom (Grimmett, Mackinnon, Erickson, & Reicken, 1990; Hatton & Smith, 1995). In both excerpts, participants made simple descriptions of their lesson flow without focusing on any incidents and they were task oriented as they just thought teaching competency as meeting a set of objectives. However, they were also critical to their actions in class to some extent. The analysis of the data revealed that participants mostly reflected on issues related with their choices in action, and possible effects of these choices, practices that affected student learning and decisions

relative the context of situation. The following excerpts can be considered as a straightforward evidence of contextual level of reflectivity about these issues.

Excerpt 1: “When I watched my performance, I couldn’t find myself as effective as I thought. The first thing that I realised was the warm up activity. There were some missing points. For example, if I had organized the classroom’s physical environment according to my activity beforehand, I could give more effective instructions. Next time I should consider the physical organisation of the class”. (Study Group, Female P 2, first reflective entry)

Excerpt 2: “When I watched my first performance, I realised that I translated my sentences again and again. Therefore, I was careful while giving instruction in my second performance. When I realised that they did not understand my instruction, I tried to make it easy for them. Then viewing their interest and attitude to understand me and my activities made me happy”. I think I have been improving myself. (Study Group, Male P 12, second reflective entry)

Although related literature asserts that several beginner teachers tend to act out at the technical level due to their lack of schema in dealing with educational difficulties (Taggart & Wilson, 1998), the excerpts above might be considered as the evidence for producing reflections at the contextual level as they were exposed to self-monitoring in the form of video recording and analysis. In the first excerpt, participant reflected on the necessity of the rearrangement of classroom’s physical organisation and she stated that she would consider it in her next performances. In the second excerpt, participant changed his instruction style as a consequence of his previous reflections. Both excerpts can be considered as contextual level according to Taggart and Wilson as they assess implications and consequences of their actions.

The shift in the reflectivity level could become obvious as the participants progressed in self-monitoring in the form of video recording and analysis. Their reflectivity level slightly moved from technical level to the contextual level and some pre-service teachers started to produce some dialectical reflection. In the table 4.12, the reflectivity levels of the participants in the mid-phase of the study are indicated.

Table 4.12

Reflectivity Levels of the Pre-Service EFL Teachers in Study Group at the Mid-Phase of the Study

Level of Reflectivity	Frequency
Technical Level	46
Contextual Level	58
Dialectical Level	5
Total	109

As can be noticed in the table 4.12 above, the pre-service teachers more frequently reflected at the contextual level in the mid-phase of the study and this asserts that they became more meticulous about their actions and decision about teaching. When it was compared with the reflectivity level of the participants in the beginning of the study, the outstanding number of the technical reflection declined, and the contextual level became the most frequent one. Even though they still tended to reflect at the technical level at a considerable amount, some of the participants also began to reflect at the dialectical level.

In Figure 4.3, the progress in the reflectivity level of the participants is demonstrated in percentages. The figure illustrates the shift in the reflectivity level of the participants.

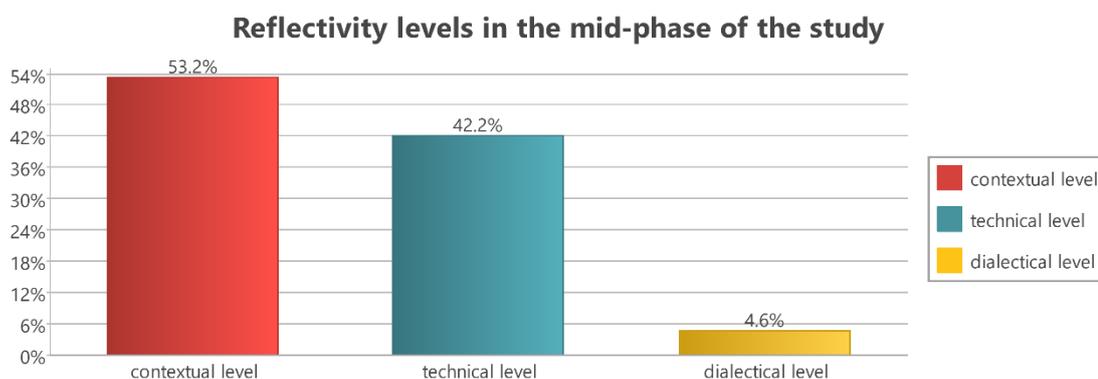


Figure 4.3. The reflectivity level of the participants in the mid-phase of the study

As can be observed in the figure above, the percentage of the statements written at the contextual level gradually increased as the study progressed. As they spent more time in practicum schools and became more familiar with the teaching process, they started to watch their videos more comprehensively. Therefore, they performed a higher level of thinking which led them to reflect at contextual and dialectical level.

Among the fourth, fifth and sixth reflective entries, which referred to the mid-phase of the study, some of the participants continued to reflect at the technical level regarding their appearance, time management, flow of the lesson, lesson planning, material choose, use of voice, interaction, and classroom management. The evidence for these issues can be provided in the following excerpts, which refer to the technical level. In the first excerpt below, participant 6 did not use his existing schemata for drawing conclusions but he focused on his appearance and posture by only describing a disturbing behaviour of putting his hands in his pocket.

Excerpt 1: Recording yourself is sometimes a problematic process, but as you watch yourself on video and see yourself how you are moving, your body language and your gestures. You realise your mistakes about your teaching, your instructing and giving feedback. I mainly noticed

in this lesson's video that, I should not put my hand in my pocket. (Study Group, Male P 6, fifth reflective entry)

Excerpt 2: When I checked the lesson plan before my practice, it seemed appropriate to my teaching, but when I watched the lesson, I realised there were many differences between video and lesson plan. I observed that I could not use time successfully and I couldn't do the wrap-up part of my lesson as I planned, so I do not think the pacing of the lesson was appropriate to my lesson plan, not exactly. (Study Group, Female P 8, fifth reflective entry)

In the second excerpt above, participant complained about the pacing of her lesson and she just focused on reaching the objectives of her lesson plan which could be considered as technical.

On the contrary to the statements at the technical level, some of the participants started to reflect on teaching practices which affect students' learning, analyse problems, look for solutions or alternatives, assess implications and consequences of their actions. The following excerpts could be regarded as a straightforward evidence of reflections at the contextual level as both participants stated that they changed their teaching styles and their behaviours in the classroom.

Excerpt 1: Actually, this week I was not going to check the instructions. But in the lesson, I thought for a second and I thought that it was a must in teaching and learning. Because saying "Did you understand?" can make your students lazy. Therefore, in this lesson I checked the understanding (instructions) and it was really nice. I mean I got expected answer. It is probably because I have watch my first video of teaching and I shortened my instructions. I really felt good when students answered the questions of "What will we do? Who wants to tell?" (Study Group, Male P 14, fourth reflective entry)

Excerpt 2: While watching my first performance, I realised that I could not come closer to students. It seemed there was an invisible wall between the students and me. Thanks to the video recording, I was more comfortable in this lesson than the previous one and I stood close to the students. I checked their books and I asked their names by standing next to them. In this video, I observed that I was relaxed and spent more time around the students. (Study Group, Female P 9, fourth reflective entry)

In addition to this shift from technical to contextual level of reflectivity, some of the participants made a move to the highest level of reflection. They achieved individual autonomy and self-understanding as teachers and they started to express themselves with efficacy and self-confidence. The following excerpt can be considered as a persuasive evidence for this shift as he reflected critically.

Excerpt 1: As I stated in my previous reflection documents, the knowledge of recording myself in teaching practice affects every detail related to both inside and outside of the classroom. What I mean is that I take the variety and applicability of the materials/resources into consideration before coming to classroom because video shows the necessary warnings while watching and evaluating myself. I have some experiences and I had chance to record myself several times which means these gave me opportunity on how to select the materials, how to adapt them according to unexpected situations, how well the organization and application is, and how fine things work out by means of resources and materials. So, while I was preparing my plan, I made myself sure that I had no problems related to materials and I was ready to put them in practice in classroom well. I did the necessary corrections, simplified some of the points, and planned the ways of alternatives to unexpected questions. (Study Group, Male P 10, fourth reflective entry)

In the excerpt above, it is clear that pre-service teacher started to develop his knowledge on teaching and began to recognise himself as a

teacher. In other words, he reconstructed the experimented classroom acts as a self-reviewer.

As the study progressed, the transformation of the pre-service teachers regarding their reflectivity becomes noticeable. The analysis of the last three reflective entries provides clear clues of this shift. In the following table, participants' reflective thinking levels at the end of the study are demonstrated.

Table 4.13

Reflectivity Levels of the Pre-Service EFL Teachers in Study Group in the final-phase of the Study

Level of Reflectivity	Frequency
Technical Level	15
Contextual Level	22
Dialectical Level	28
Total	65

As it can be observed in the table 4.13, the frequency of the technical and contextual level reflection decreased but the frequency of dialectical reflection increased. The table depicts the upside down of the Taggart and Wilsons' reflective thinking pyramid (2005) in which the hierarchical nature of reflective thinking is demonstrated. By the assistance of self-monitoring in the form of video recording and analysis, pre-service teachers increased their awareness of their strengths and weaknesses and they began to develop their routines by systematically questioning their practices. They shaped their own development and self-monitoring could provide them a mirror in which they actualised individual autonomy and self-understanding.

The illustration of the shift in participants' reflective thinking levels is shown in the figure 4.4 below. The effect of the self-monitoring becomes observable at the end of the study. The reflective focus of the participants gradually shifts to the highest level of reflection.

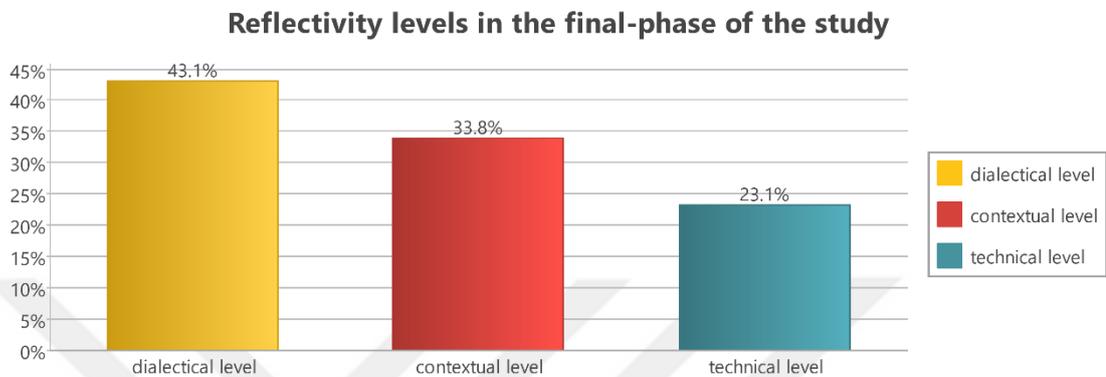


Figure 4.4. The reflectivity level of the participants in the final-phase of the study

In the last three reflective entries, pre-service teachers more frequently reflected at the dialectical level. It is clear from the illustration that they started to question their practices systematically, reflect of decisions during the lesson and achieve disciplined inquiry and self-understanding. In addition to this improvement, they sometimes still reflected on issues at the technical level as their teaching routines were still developing. Some of the statements at the technical level are provided below for an indication.

Excerpt 1: In this video, I observed how desperate I was in the classroom while forcing the students to speak in English. I asked questions in English, they knew the answers, and they could answer in English, but they preferred to say it in Turkish. I got the answers in Turkish, but I continued to give them feedback in English. In the end,

I saw that I gave up and completed the lesson in Turkish. (Study Group, Female P 8, eighth reflective entry)

Excerpt 2: This lesson was like a summary for all my performances because it was a round-up lesson and we made revision. And this class was the class I performed most so, I really got used to them and they got used to me, too. I remembered the students in my first performance. Many of them were a bit shy but I can see the difference in this video. In the video I realised that most of the students knew me, and they wanted to attend the lesson. We had a good relationship. I can estimate how they can learn and which answer they can give. (Study Group, Female P 5, eighth reflective entry)

Both pre-service teachers in the excerpts above made simple descriptions of their practices rather than commenting on them with a critical eye. They did not question their practices or looked for novel approaches, but they just focused on completing the tasks.

In addition to the reflections at the technical level, 33,8 % of the statements are reflections at the contextual level. Some pre-service teachers were still developing their routines about teaching. Therefore, they were in the need of searching alternatives to practices based on their knowledge and beliefs, focused on actions, reflected on practices affecting students' learning, and assessed implications and consequences of their actions. Some of the excerpts are provided as an indication of this shift.

Excerpt 1: With video recording a lesson, I understood the importance of having a B plan in my pocket. In my previous lesson, I thought that the same procedures would work well for the other class. However, it did not work. At that moment, I could not find a solution to fix this problem, but I produced alternative solutions to continue the lesson while watching my video later and prepared some more activities in

advance for my next lesson. Viewing yourself helpless in class situation forces you to develop new approaches to your teaching (Study Group, Female P 15, ninth reflective entry)

As Taggart and Wilson (1998, p.4) proposes that practitioners at contextual level “understand concepts, contexts, and theoretical bases for classroom practices, then defend those practices and articulating their relevance to student growth”. In this entry, participant improved her knowledge about the importance of having alternative plans for the situations that they might get stuck in and these instances enabled them to assess the implication and consequences of their actions.

Excerpt 2: Video watching not only helped me improve my pronunciation skills, but it also assisted my correction skill of students' pronunciation mistakes. I learned that we should check the pronunciation of any unknown vocabulary in the text in order to be a good model for my students. Thus, I checked every piece of items in my lesson plan and I took good care of grammar and pronunciation. In this video I realised that I did not let time my students to find out the correct pronunciation of words, but I directly gave the correct pronunciation. In my next performance, I will try to be silent in order to have them realise their own mistakes by giving them second chance. At that point, I will try to give clues about pronunciation or let the other students provide correct pronunciation. I can say that all the experiences I have gained related to both correction and teaching will be guide for me. (Study Group, Male P 10, ninth reflective entry)

Furthermore, this excerpt clarifies that video self-monitoring assisted participants' skills of analysing, clarifying, and validating their practices which yield to enhancement of their reflectivity level.

At the end of the study, 43,1 % of the statements are at the dialectical level. In other words, pre-service teachers became more critical about their teaching process

and focused on challenges precisely related to teaching practices. Most of the statements at the dialectical level refers to decisions and their consequences taken during lesson, systematic inquiry of their practices, and achievement of disciplined inquiry and self-understanding. The final reflection statements can provide a support for quantitative findings concerning the shift in the level of reflectivity. Some of the excerpts are provided as evidence for this shift.

Excerpt 1: I corrected myself after making video self-reflection. I noticed some problematic areas then I tried to solve them in the following performances. For example, I used “ok friends, and good” so often, and I changed these words and selected alternative ones. Again, while maintaining and making eye contact, I realised that I was looking at the same position and just in one line, but I improved myself after self-monitoring myself. (Study Group, Female P 5, eleventh reflective entry)

In this entry, it is clear that she achieved a disciplined questioning skill which enabled her to reconstruct her actions or classroom situations continuously with responsibility. Taggart and Wilson (1998, p.42) state that practitioners at this level reach “an autonomous state evidenced by disciplined inquiry, reflection-inaction, self-actualization, and self-efficacy”.

Excerpt 2: Considering each moment of this six performance-process, it is for sure that every one of the problems identified in my teaching was recorded to be corrected. Each step has effect on another. What I am trying to say is that my sixth performance is the combination of the comments and critics that I made for previous performance. It is surely beyond doubt that I will never give up questioning which means my teaching will always have the effects of previous steps. ". (Study Group, Male P 10, ninth reflective entry)

This entry reveals that the participants progressed at the dialectical level where he systematically questioned his practices.

Once the overall results of the qualitative findings regarding the shift in their reflectivity level reviewed, it can be concluded that the reflective thinking of the participants was increased in parallel to the quantitative findings of the study. At the outset of the study, most of the pre-service teachers reflected with a small amount of schema or information to deal with problems in classroom and they mostly focused on appearance, time management, flow of the lesson, lesson planning, and material choose, use of voice, interaction, and classroom management issues. As the study progressed, the statements at the technical level decreased and pre-service teachers began to produce statements at the contextual level. In the mid-phase of the study, they mostly concerned with practices, which affected students' learning, analysed problems, and looked for solutions or alternatives, and assessed implications and consequences of their actions. As they gained more experience in real classrooms and realised their mistakes-weaknesses in the teaching progress thanks to the self-monitoring activity, they became more critical about their practices and they started to produce reflections at the dialectical level at the final-phase of the study. In the last three reflective entries, they mostly addressed the decisions and their consequences taken throughout the lesson, they started to question their practices systematically, and achieved disciplined inquiry and self-understanding. The dramatic increase in the reflective thinking levels of the pre-service teachers in the reflective entries could support the quantitative findings of the study.

Apart from the overall shift in the reflectivity level of the participants in the study group at the end of the study, another analysis was carried out to test whether this shift was derived from only some particular participants or it was originated from

the whole group. Since the shift in the reflectivity level became obvious in the mid-phase of the study, and it continued to increase incrementally in the final-phase of the study, the mid-phase data and final phase data were analysed regarding the shift from the contextual level to the dialectical level. The sources of the frequencies in the mid-phase and the final phase of the study are demonstrated in the table below.

Table 4.14

The Source of the Frequencies Regarding the Shift from the Contextual Level to the Dialectical Level in the Mid-Phase and the Final Phase of the Study

Study Phase	Dialectical Level Reflectivity Frequency	Source
Mid-Phase	1	P6
	1	P9
	3	P10
Final Phase	3	P1
	2	P2
	1	P3
	2	P5
	3	P6
	1	P7
	4	P9
	5	P10
	1	P11
1	P13	

2	P14
3	P15

As it is demonstrated in the table 4.14 above, five dialectical reflections were observed in the mid-phase of the study and these were produced by three participants (P6, P9 and P10). The statistical proportion of these reflective entries demonstrates that 60% of these entries were resulted from only one participant and the rest was originated from other two participants. As it is the mid-phase of the study, such individual performance differences on being reflective at the highest level can be considered as normal.

When the distribution of the dialectical level reflective entries in the final phase of the study was analysed, it could be concluded that almost each participant reflected at this level once. However, the distribution reveals the importance of individual progress difference in terms of reflectivity. The remarkable shift in the dialectical reflectivity level is about the participants who started producing reflective entries in the mid-phase of the study. These three participants, namely P6, P9, and P10, are the leading participants among the whole group about reflecting the issues at the dialectical level. They produced 12 of the dialectical reflective entries out of 28 total entries. Twelve of the participants reached to the highest-level reflectivity in different proportions based on individual performance. In the following figure, the proportion of the individual reflective entries in percentages at the dialectical level is demonstrated.

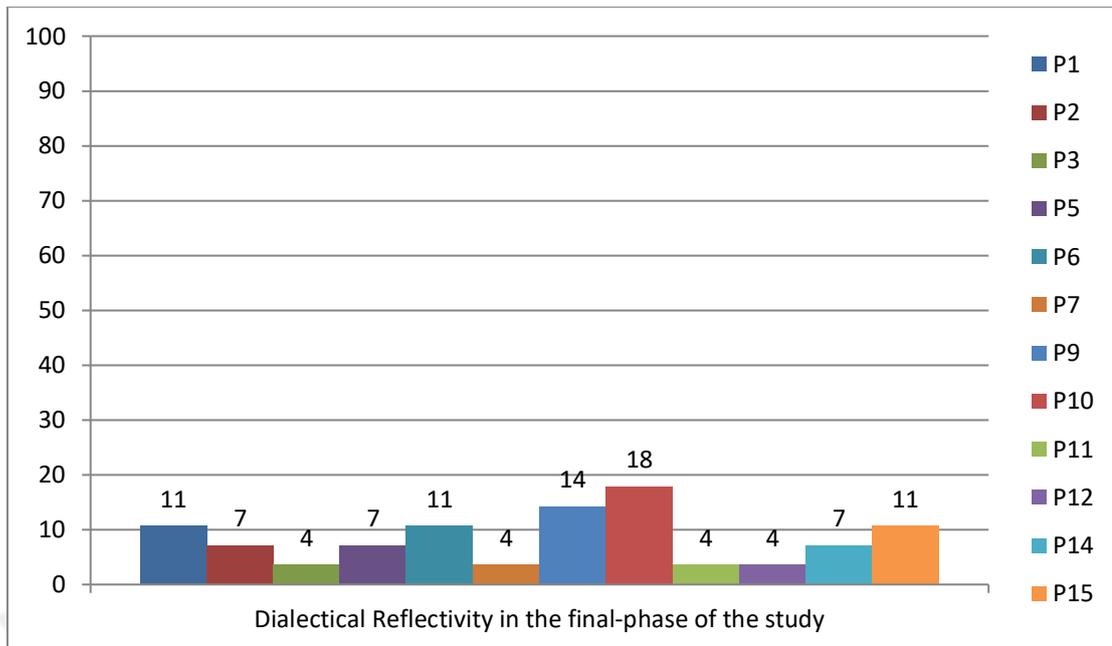


Figure 4.5. The proportion of the individual reflective entries at the dialectical level

Another outstanding result of this analysis is that three participants did not produce any reflective entry at this level. In other words, they did not reach this level of reflectivity. These participants are P4, P8 and P13. Among them, P4's result is a hundred percent consistent with the quantitative findings of the study as his score on the pre-test and post-test remained at the same level, which was contextual. P13's scores for quantitative and qualitative analysis were partially overlapped. Even though P13' score on the quantitative analysis reached the highest level of reflectivity, it was on the fringe as his score was 105 which was just one point above the Taggart and Wilsons' categorisation range for the reflectivity levels. However, P8's quantitative result is inconsistent with the qualitative one. In other words, he did not produce any reflective entries at dialectical level in the qualitative part of the study whereas he reached this level in the quantitative part of the study.

In addition to the overall analysis of the shift in the reflectivity level at the end of the study, it is necessary to clarify this shift at the individual level. Therefore, some selected cases are listed below as the evidence of this shift on individual participants. For the selection of cases, the developmental process of the participants regarding their gained scores from the PRTA instrument are analysed and three cases are chosen. Among the fifteen participants, one case, which had the highest improvement, other case, which had a moderate increase, and another case, which had the least progress, are selected for in depth analysis of the shift in the reflectivity level of the participants.

4.2.3. The case of John

The first case is the male participant 6, a pseudo name John is assigned to him. He is from Izmir. He graduated from İzmir/Torbalı Anatolian High School that offered compulsory prep classes. He enrolled the university in 2009 and he succeeded in the exemption exam, and he started the English Language Teaching Department. At the time of the study, his GPA was 2,92 which could be considered as a successful pre-service teacher. In addition to this, he improved his reflectivity level with 17 points between the pre-test and post-test of the Profile of Reflective Thinking Attributes which meant he shifted from contextual level to dialectical level. For these reasons, he is selected as a case to be investigated in depth.

The analysis of the qualitative data reveals that John had three reflective statements at the outset of the study. One of them is at the technical level and others are at the contextual level. In his reflective statements at this level, John was mostly concerned with the flow of the lesson, level of the students, problems with teaching aids and his instructions. In the following excerpt, which can be considered as

technical level reflection, he just focused on the flow of the lesson, level of the students and instructions.

Excerpt 1: As I watched myself on video, I became aware of the level of the students. Since this was my first lesson with the real class, I did not exactly know the needs and the expectations of the students. The proficiency level of the classroom was higher than the classroom I had been in the first semester. Therefore, the lesson had a faster flow. I did not need to repeat the instructions so many times or teach slowly. I really liked this class and enjoyed teaching them. (John-second reflective entry)

In this reflective statement, the main concern of John was, not knowing his students' characteristics in terms of their level, needs and expectations at the surface level. He mostly focused on the proficiency level of the students and his instructions, which was principally affected by students' level. However, in his third reflective entry, he started to be more critical about his instructions and progressed to the contextual level. The excerpt below could be reflected as a sign for this change.

I believed that viewing previous performances influenced the planning stage of my following lessons. When I watched my first performance, I realised the students were not successful enough in understanding the instructions. Therefore, for my next lesson plan, I prepared my instructions in a short and clear way. I always tried to balance my instructions with the level of the students and use simple language in the third performance. (John-third reflective entry)

As can be noticed in the preceding excerpt, John's reflective statement is in the contextual level as he was concerned about the level of instructions, the possible effect of his choices about instructions and students' needs. He, therefore, reflected on practices affecting students learning.

As the study progressed, John's reflective statements began to include more concerns about analysing classroom environment, the problems that they encountered in class and the solutions to these problems. Therefore, the quantity of the reflective statements increased in a positive way. In the mid-phase of the study, John produced five reflective statements, 2 of them are at the technical level, other two are at the contextual level and one of them is at the dialectical level. In the following excerpt that was written in the mid-phase of the study, John's reflective statement is at the contextual level.

In my previous videos, I realised that I could not provide effective praise to the students. Actually, this was one of my problems. I could not support student by using different kind of praises. I just said, "yes, well." At 5:15 in my video, as can be seen, I just said 'Good, that's true, thank you' but I could be sincerer and motivating for student by saying "that was a really interesting prediction, thank you, let's see what will happen." It is the point that I need to improve myself. (John-fifth reflective entry)

In the excerpt above, John focused on his weaknesses about motivating the students. He pinpointed this issue as a problem, and he proposed that he should improve this ability. In other words, he began to be more critical about his actions in class and tried to relate theory to practice. Furthermore, he achieved disciplined inquiry, self-understanding, and self-actualization, which led him to the dialectical level. In the following excerpt, his statement is at the dialectical level.

Every time I watch my performances on video, and I realise some missing part of the lesson. I try to reorganize my lesson for the next time. For example, in the beginning of the term, I was continuously checking the instructions. Nevertheless, in my later performances, I

realised that there was no need to check instructions when they were clear, and I stopped checking each instruction. (John-sixth reflective entry)

This statement exemplifies that John was benefitted from self-monitoring in the form of video recording and analysis and he started to question his practices systematically. He tried to reconstruct his actions by reviewing himself as a teacher.

In the final-phase of the study, the analysis reveals that he had five reflective statements, three of which are at the dialectical level. One of the other two is at the technical level and other is at the contextual level. At this stage, John mostly focused on the effect of self-monitoring activity to be aware of himself as a teacher. The excerpt below is provided as a sign.

Video analysis as a self-monitoring activity is the easiest but the most effective way of teacher improvement and evaluation. Even though it is quite stressful in the beginning, later it helps the teacher to be the best he can be by considering his weaknesses and strengths. If a teacher pays attention to the professional development, he should constantly question his practices and video based self-monitoring is an effective tool for becoming an effective teacher. Furthermore, this process made me be aware of myself as a teacher. (John-ninth reflective entry)

In the excerpt above, John was worried about his professional development and he internalised that one should systematically question his/her own teaching to enhance his or her teaching practice. Furthermore, this excerpt demonstrates that he achieved the ability of expressing himself with efficacy and self-confidence.

Besides, John also became more critical about moral, ethical, and socio-political issues associated with planning and implementation stage of teaching. In the

following excerpt, it is obvious that he was concerned about his students more than himself and he began to act out in a contemplative way which could be considered as a sign of dialectical reflection.

Throughout this video analysis process, I understand that teaching is shaped according to students' profile that is why identifying their features, needs, levels, and even relationships among students is fundamental in reaching your goal. Therefore, as a teacher we need to pay much attention to our learners, especially the ones who do not involve to the lesson. (John-ninth reflective entry)

The excerpt above can be a clear example of his reflectivity growth as he realised the importance of students in all aspects for planning and implementation process.

4.2.4 The case of Jane

The second case is the female participant 1, a pseudo name Jane is assigned to her. She is from Kırklareli. She graduated from Lüleburgaz High school. Similar to the first case, Jane also succeeded in the proficiency exam about obligatory preparatory class and started her academic career at the ELT department. At the time of the study her GPA was 2,62 which could be regarded as a pre-service teacher above average. Furthermore, the quantitative analysis reveals that she had 10 points improvements in her reflectivity level, which could be considered as a moderate increase. Hereby, she is picked up as a case to be investigated in depth.

In the beginning of the study, Jane produced eight reflective statements. Four of them are at the technical level and other four is at the contextual level. Generally, she was interested in her tone of voice, overuse of correction words, grammar mistakes in her instructions and maintaining authority in class in the beginning of the

study. Some selected excerpts are given below as an indication for technical reflection.

Just after the lesson, I thought that I did my best while teaching in class. However, I noticed some disturbing points when I watched my video. For example, I used correction words too many times in the presentation. I did grammar mistakes. The most disturbing thing that I realised is the production of unnecessary voices like “hiiiiii...iiiiim” before my explanations. Especially these are really irritating. (Jane-first reflective entry)

I recognised that I could not control and monitor the whole class. Some students wanted to go to the toilette or wanted to change their desk (generally boys) so I lost the control and could not guide them without saying, “Ok stop this and stay your own desk.” As they were adolescents, they felt themselves very free, in that class (9-D) such kind of students were my biggest problem, and it affected my performance negatively. (Jane-second reflective entry)

As can be observed in the excerpts above, some of Jane’s reflective statements are at the technical level as they just referred to the observation of her behaviours and actions. In other words, she could not see the big picture but just focused on the actions at the time of lesson. However, she also produced some reflective statements based on her previous video analysis procedures. It is understood from the following excerpt that Jane had a progress in her teaching in a reflective way. In other words, she began to reflect on decisions relative to the context of the situation which refers to the contextual level according to Taggart and Wilson (1998).

While watching my previous video performances, I realised some students were unattended. In my following performances, I tried to pay attention to those students. In this performance, I noticed a student who was sleeping in the lesson. As far as I observed him in my previous

performances, he did not participate the lesson so much. For my lead-in part, I had a pair-work activity and that boy was sleeping again. I warned him and changed his desk. I assisted him to do the pair work and I could make him participate to my lesson. I was happy when I saw him; he was reading (Jane- third reflective entry)

Although it was the beginning of the study, Jane had the tendency to observe her problematic students and reflect on practices as those practices affect students' learning. This reflective statement represents that Jane tried to make choices based on her knowledge and she began to look at alternative practices in order to reach all the students in her class.

As the study progressed, Jane produced 13 reflective statements in the mid-phase of the study. Five of them are at the technical level and the others are at the contextual level. In this sense, it can be concluded that she increased her reflective statements at the contextual level and became more critical about her students. In other words, she started to notice problematic areas in class and tried to find solutions, which would lead her to the highest level of reflection.

However, being a pre-service teacher, Jane was still improving her knowledge about teaching and continued to produce reflective statements at the technical level in which she just considered teaching as classroom management. The excerpt below is a clear evidence for this situation.

What I observed in this video recording is my attitude towards unenthusiastic students. The lesson was based on reading and writing, so some students got bored while doing the activities. Moreover, there were two boys who really did not care about lesson and just put their head on the desk. I really did not like the situation kind of this. But I ignored them as I did not want to spend time dealing with them. I really do not like my attitude. I think I should gain more experience about this kind of situations. (Jane-fourth reflective entry)

In the excerpt above, Jane again focused on reaching all the students or maintaining classroom management in order to reach her goals of the lesson. In other words, she did not use her existing schema to solve the problem which is a characteristic of a technical practitioner.

In addition, she produced eight reflective statements at the contextual level. In those entries, she aimed to assess her choices, and implications, and consequences of her actions and beliefs. Therefore, she began to analyse her classroom practices rather than just focusing on technical aspect of the classroom environment. The following excerpt is an indication of this change.

In today's lesson, I had some problems. When I watched my video, I recognised those problems better. First, I had some problems in the warm up stage. Some spoilsport students showed their cards but showing them was forbidden and I had explained this. So, I would be more prepared for such kind of students and design the materials more carefully. In addition, I would not do my exercises only with worksheet. I wanted to make them see and write something; thanks to worksheet, they would be able to study them at home before the exam. Nevertheless, in the classroom only handing out papers was not enough. I will use PPT or different activities to make the topic clearer.
(Jane-fifth reflective entry)

It is apparent from the excerpt above that Jane had a tendency to analyse, clarify and validate her actions and choices in class and by this way she started to reflect her teaching manner at the contextual level where one can make use of theory and try to connect their knowledge with his actions to sparkle students' growth.

In addition to the example above, Jane also criticised her behaviours and had a conclusion to do some alteration about her behaviours.

When I watched my performance, I realised that I should try to do different things to pay their attention to the activities. In the video, I asked “Is it finished?” to check whether all the students finished the task and I got the answer of no and I realised that some of the students even did not hear what I asked. Therefore, I need to find other signs referring to the completion of the task such as clapping my hands. Sometimes they should remember the control is on me, not the teacher is up to them. (Jane-fourth reflective entry)

In this excerpt, it is clear that Jane began to look for alternatives to classroom practices based on her experience and tried to find the best solution which could fit the context according to both her and students’ needs.

In the final phase of the study, Jane produced six reflective statements, three of which are at the dialectical level and others are at the contextual level. Jane’s progress in her reflectivity level is evident as three dialectical reflective statements are produced in the last phase of the study.

Since the beginning of the study Jane has had problems about unattended students, she improved her awareness about those students, and she tried to improve herself about this issue. The excerpt below is an example how she reacted and enhanced her reflectivity level.

In this lesson, I had a reading activity. They had to read it with their partners. But a male student did not want to read. He had no partner. So, I sat down near him, started to read with him. But he still did not want to read the dialogue. Then I did not want to force him and said "ok, no problem". I called another student to be a partner for him and he started reading. For such kinds of situations, I would be more prepared and think about another way to make them join the lesson. I was happy to see how the continued reading in the video as I did not focus on them much in the lesson. I know there are more creative and

effective ways to handle with those situations and I should learn them.

(Jane-sixth reflective entry)

The excerpt above is a straightforward evidence that Jane produced reflections at the contextual level. She tried to involve all the students to her lesson and reflected on practices affecting students learning by searching other teaching options based on her knowledge and personal values.

In the last phase of the study, Jane reflective statement about the same issue, unattended students, is at the dialectical level as she started to see the big picture of teaching.

As a trainee teacher, I planned the activities time requirement but the students who have less proficiency level than the others could not finish the activities besides this there are students who do not want to join the lesson, some are sleeping during the lesson. The teacher should find a solution to have them join the classroom procedure. For this reason, teacher can talk to the students, even their parents, and other colleagues to find out the problem of the student. Therefore, I previously learnt the students' names, asked them questions by using their names. Time to time there were students who did not do activities but speaking, I changed their places. Finally, I realised from the video that a teacher should move around the classroom in order to reach all the students. I moved around class and checked the students' works which really helped. (Jane-eighth reflective entry)

In this excerpt, Jane reacted on unattended students by calling their names and changing their places by reflecting on decisions during the course of the action, but she also focused on other stakeholders of teaching such as parents and other colleagues, which could be regarded as an ethical issue. These efforts could be considered as the action of a dialectical practitioner

4.2.5. The case of Mike

The third case is the male participant 10, a pseudo name Mike is assigned to him. He is from Manisa. He graduated from Turgutlu Anatolian high school. Similar to the previous cases, he enrolled the ELT department in 2009 and he succeeded in the exemption exam and started as a freshman. At the time of the study, his GPA was 2,72 which could be considered as a pre-service teacher above average. Besides, his improvement about the implementation of the Profile of Reflective Thinking Attributes was just 6 points, which meant he was one of the participants who had the least progress. Therefore, he is selected as a case to be investigated in depth.

Even though Mike was the one who had the least progress in terms of quantity, he was one of the participants producing many reflective statements throughout the study. In the beginning of the study, Mike produced twelve reflective statements. Out of 12 statements, seven of them are at the technical level and five of them are at the contextual level. In his technical level reflective statements, Mike was worried about checking instructions, his mood, reaction to an unexpected situation, body language, posture and maintaining authority at the technical level. Some of the excerpts are given as an indication.

What I realise in my video recording is that I am indecisive about the type of the reaction that I am supposed to give when I face to a problematic situation. For example, when noise rises, I panic, and cannot select right words at that time. I consider it as a weakness. This failure will be fixed with experience, I believe. (Mike- first reflective entry)

In my second video analysis, I observed that I sometimes lost the control of the students and had difficult moments while trying to maintain silence. When this problem was repeated on and on, I had to

use Turkish to warn them. This helped me to create silence all along the lesson but made learners nervous. (Mike- second reflective entry)

In these excerpts, it is clear that Mike just focused on classroom management skills by focusing on his behaviours, content and his background knowledge but he did not look for alternatives. His reflection was just like describing his lesson regardless of any analysis and suggestion to these problems rather than he could fix these problems with experience. In addition, Mike was seriously concerned with not knowing what to do in any unwanted situation in the beginning of the study.

However, he started to reflect at contextual level after commenting on his first video.

Another issue that I fixed up by watching my video was my attitudes towards an unwanted condition in lesson. I mean that I could not react to overcome the problem as I was supposed to do when I faced to a problematic situation because of my anxiety and indecisiveness to choose right words to say. However, for this performance, I had prepared some sentences and took precaution in case of facing to a problematic condition, as I was aware the fact that I did not had classroom routines yet. So, this precaution helped me to be relaxed and give more sincere feedback. (Mike- second reflective entry)

In the excerpt above, Mike commented on his weakness about overcoming problematic situations due to his anxiety and indecisiveness, but he improved himself and he started to analyse clarify and validate practices in this reflection which can be considered as contextual level.

As it is mentioned above, Mike continued to produce a considerable number of reflective statements in the second phase of the study. In this phase, Mike produced 14 reflective statements. Among them, only one of them is at the technical level, ten of them are at the contextual level and other three is at the dialectical level. It is apparent from the numbers that Mike started to reflect on his teaching in a more

critical way. At this phase, Mike was mostly worried about clarification, giving instructions, his position in class, course book selection, planning, error correction, and body language and produced reflections at the contextual level about these issues. An example of his contextual reflective statements is provided below.

As I always say, viewing my previous performance gives me ideas about how to make my job easier. Therefore, I can easily say that these previous experiences influence my planning stage. As I observed that visual materials and videos are very useful to draw students' attention at the early stage of lessons, I therefore preferred to make use of videos for my revision part. (Mike- sixth reflective entry)

The most critical point I put into my pocket for my future career about video analysis was that being enthusiastic to do a job and enjoying it. I was not addicted to any course book this time, which gave me freedom of organizing each step as I wished, and this situation gave me a positive energy and a different kind of willingness. As I observed both from the real classroom and recorded video, students loved visual teaching materials. Therefore, I found some PPT, videos and a song, which was one of my favourites. I got good energy from students and this circulation made me happy. In the video I understood that when something that was confused was clarified and thought in a friendly and sincere environment, the atmosphere of learning process in classroom turned into joy and excitement for both teacher and student. Video viewing gave me a second change of feeling the same things. (Mike- fifth reflective entry)

In the excerpt above, Mike commented on the effect of video aided self-monitoring on lesson planning and the effect of creating a friendly atmosphere on teaching process. He implied that it was the teacher, not the course book, could create a dynamic classroom atmosphere, which could lead to a better learning situation. It is understood that he started to relate the theory of teaching to the practice and started to

look for alternatives to practice rather than just following to the ready material and his reflection at the contextual level may lead him to a better teaching situation.

In addition to the reflective statements at the contextual level, Mike also began to generate reflective statements at the dialectical level in the mid-phase of the study. By the effect of self-monitoring in the form of video recording and analysis, he became aware of himself as a teacher and discovered that this process would assist his professional development. In the excerpt below, he commented on his progress at the dialectical level.

The things I observe, and report are the ones which will enlighten my way. I take good care of this reflection job as I clearly see the differences between the previous performances and this one. The only proof is what I see. That is why I will take this identification job more seriously day by day. Because what I see is “things are going better and better as analysing.” I will never stop trying to detect a mistake for myself. That’s the person I am and will be, not for just teaching something, but for learning all along. (Mike- fourth reflective entry)

It is clear from the excerpt above that Mike developed his expert knowledge, gained the ability of questioning himself, and believed that being critical can make not teaching but all the other things better. He began to understand the importance of systematically questioning his actions on his professional development which a characteristic of a dialectical practitioner is.

In the final phase of the study, Mike’s reflectivity level improved in a positive way, he produced seven reflective statements, five of which are at the dialectical level, and other two is at the contextual level. In his reflections at the contextual level, he focused checking comprehension between activities rather than just completing all

the tasks provided in the course book. The excerpt below is an example of his contextual reflection.

In this analysis of my video I observed another weakness. It is related with checking understanding between the activities. In the planning stage I planned a well-built warm up activity-tongue twister- and for the rest of the lesson I was supposed to follow the activities from the course book. As far as I was they were in an order and transmission between one and other was good. I implemented the lesson in this way and I thought everything was fine. However, I realised that I zipped past the activities and did not check whether all the students fully understood what they were doing. It could be better if I stopped at the end of some activities, checked comprehension, and emphasized some structures. For my next performance I will pay attention to that. (Mike-seventh reflective entry)

It is clear from the statement above that Mike developed his understanding about classroom practices and he started to assess the outcomes of his actions and judgements and he reflected on his decisions related with the context of the situation.

In addition, he altered to a more decisive teacher and he developed his routines, professional knowledge, and ability to reconstruct his action for reviewing himself as a teacher. Therefore, he produced reflections at the dialectical level. An example excerpt is provided below.

I can say that I am on way of being an effective teacher as I am doing it ambitiously. I am comfortable, and I set my aim before coming to classroom. I enjoy the steps of preparing my plans and stages and watching them implemented in the classroom is unique. I have tendency to detect my weaknesses and identify them which give my power to develop my teaching by correcting over and over again. This never-ending self-criticizing is one of my strengths that make me effective before-while and after the lessons. In lessons, I take good care

of each student and I do what I can to have them join the lesson. I try to give equal chances to each member of the class, which is a proof for my fairness. In this way, I can activate all the students because I do not want them to sit in class in silence. (Mike- eight reflective entry)

In his statement above, Mike had the ability to express himself with efficacy and self-confidence, which is accepted as an unambiguous evidence of reflection at this stage. He proposed that identifying his weaknesses strengthened his research feeling and it gave way to be a better teacher. Furthermore, he focused on some moral and ethical issues, which can again be considered as a sign of reflection at this level. He claimed that he was a fair teacher and he tried to reach all the students.

The analysis of individual cases reveals that there was a hierarchical improvement in the reflectivity levels of the pre-service teachers due to the implementation of self-monitoring activity in the form of video recording and analysis. This finding supports the quantitative results of the study. Table 4.15 below summaries the overall improvement of the selected cases.

Table 4.15

Analysis of Shift in the Reflectivity Levels for Selected Cases

Participant	Outset	Mid-Phase	Final Phase	Total
John (P6-17pts)	1T/2C	2T/2C/1D	1T/1C/3D	13
Jane (P1-10pts)	4T/4C	5T/5C	3C/3D	24
Mike(P10-6pts)	7T/5C	1T/10C/3D	2C/5D	33

T=technical C= Contextual D= Dialectical

As can be clearly observed in the table 4.15 that there was a cumulative progress in the number of the reflective entries produced throughout the study and the

level of reflectivity increased along the hierarchy of reflection. The striking result of the individual analysis is the inverse relationship between the quantitative analysis and qualitative analysis. The amount of reflective entries produced by the participant 10 (Mike) who had the lowest score on quantitative analysis outnumbered the amount of reflective entries produced by the participant 1 (Jane) and participant 6 (John). However, the individual analysis of the pre-test scores demonstrated in table 4.2 provides a reasonable explanation to this improvement. Once table 4.4 is analysed, it is understood that the baseline scores of the participants were different from each other. Particularly, participant's 6 (John) starting point was lower than the other two participants. In other words, John's end point is similar to the entry level of other two participants. As the growth of reflectivity is cumulative, it can be an expected outcome that the ones who had higher reflectivity levels at the outset of the study could produce more reflective statements due to their knowledge, skills, and experience about the topic.

4.3. Findings Related to the Second Research Question

RQ2. Does the use of video based self-monitoring have an effect on the competencies of pre-service EFL teachers in terms of their knowledge on the following concept;

- a) Planning and preparing a lesson**
- b) Selecting and utilising resources and materials**
- c) Teachers' language use in the classroom**
- d) Classroom management**

If so... How?

In addition to the effect of self-monitoring on the reflectivity level of the pre-service EFL teachers, the study also endeavoured to observe the impact of video recording and analysis as a self-monitoring tool on pre-service EFL teachers' knowledge, particularly performance about "planning and preparing a lesson", "selecting and make use of language teaching resources and materials", "teachers' language use in the classroom and "classroom management". Therefore, the second and third module of the TKT were employed twice as a pre-test and post-test design to discover whether the use of this tool led to any possible positive improvements in the competencies of pre-service EFL teachers in terms of their knowledge about the themes delimited in the research question.

4.3.1 Analysis of the TKT for study and control group

In the analysis of the TKT Module 2 and 3, first the descriptive statistics of pre-test and post-test scores for both groups are presented. After that, as for a clear understanding of the effect of self-monitoring in the form of video recording and analysis, both modules are investigated in terms of the teacher knowledge themes covered in these modules separately and the results for each domain are illustrated. Finally, other statistical tests, Wilcoxon Signed-Rank Test and Mann-Whitney U test results which display the significance of difference between pre-and post-test scores within the groups and between groups are shared.

4.3.2 Descriptive analysis of the TKT module 2 for study and control group

In the following tables, the descriptive analyses of the TKT module 2 for both groups are demonstrated. Table 4.16 is about the results of study group and it presents the shift in participants' teacher knowledge particularly on planning and preparing a lesson and its flow and selecting and utilising language teaching resources and

materials before and after the implementation of the self-monitoring in the form of video recording and analysis.

Table 4.16.

Descriptive Results of Study Group for TKT Module 2

	N	Min	Max	Mps	Mean	Sd
Before Practice	15	52	65	80	60	3.72
After Practice	15	58	73	80	66.26	4.04

Note: Mps= Maximum possible score

As it is demonstrated in table 4.16, participants in the study group gradually improved their baseline scores ($\bar{x} = 60$) about planning and preparing a lesson and its flow and selecting and utilising language teaching resources and materials ($\bar{x} = 66.26$). Their pre-test scores were ranging from 52 to 65 but participants increased their scores from 58 to 73 in the post-test. As the participants in the study group trained about the use of self-monitoring activity and employed it, they were aware of where to look at their video performances and they made necessary changes to their daily plans in the following macro teaching sessions. Therefore, the difference in their mean scores (6.26) would be interpreted as the effect of the treatment which was the implementation of the self-monitoring in the form of video recording and analysis.

In table 4.17, the descriptive analysis of the control group about the themes covered in TKT module 2 are presented.

Table 4.17.

Descriptive Results of Control Group for TKT Module 2

Control Group	N	Min	Max	Mps	Mean	Sd
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Before Practice	15	55	64	80	60.26	2.86
After Practice	15	53	69	80	61.53	4.62

Note: Mps= Maximum possible score

As it is shown in the table 4.17, the comparison of the mean scores for control group regarding the results of pre-test and post-test reveals that the knowledge related with the lesson planning, sequence of a lesson and selecting and utilising resource materials is slightly increased. (Pre-test $\bar{x} = 60.26$) (Post-test ($\bar{x} = 61.53$)).

Considering the pre-test scores of the both groups as the baseline data, it can be concluded that both groups were almost equal in terms of lesson planning and course material selection and use as the mean scores of both groups were approximately identical (pre-test score of study group, $\bar{x} = 60$) (pre-test score of control group $\bar{x} = 60.26$). Therefore, the observed shift in the study group could be a result of treatment which was the implementation of self-monitoring in the form of video recording and analysis.

The overall shift about planning and preparing a lesson and its flow and selecting and utilising language teaching resources and materials between the control and study group is illustrated in the figure 4.6 below.

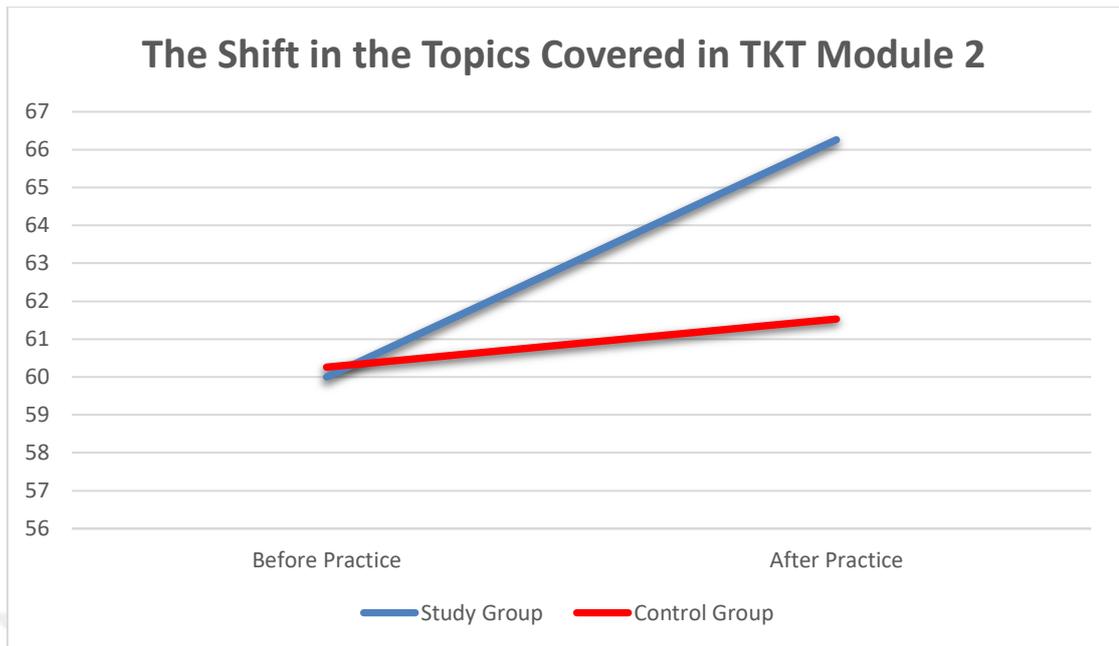


Figure 4.6. The comparison of the shift about the topics covered in TKT module 2

The illustration of the shift between groups displays the improvement more clearly. While approaching teaching and teacher knowledge, it can be difficult to assess the effect of anything on teacher knowledge. However, it can be concluded that the source of difference between the study group and control group can be attached to the impact of self-monitoring in the form of video recording and analysis.

On the other hand, TKT module 2 consists of two parts including 80 questions. The first part is designed to assess teachers' knowledge of identifying and selecting proper teaching objectives and transferring them into their lesson plans, arranging activities according to needs and levels of students and selecting or developing assessment activities consistent with the lesson. The purpose of the second part is to assess teachers' knowledge about selecting and using reference and supplementary resources for lesson preparation. Therefore, there is a need to investigate these parts

individually in order to understand their weight on the overall shift. In the following tables, participants' individual scores for each section of TKT module 2 are presented.

Table 4.18.

Individual Scores of Both Groups for Planning and Preparing a Lesson or Sequence of Lessons

Study G.	Pre-Test	Post- Test	Control G.	Pre-Test	Post- Test
P1	28	34	P1	28	31
P2	35	38	P2	31	33
P3	35	38	P3	34	37
P4	30	34	P4	32	35
P5	30	32	P5	32	32
P6	32	36	P6	32	34
P7	26	32	P7	36	35
P8	24	32	P8	33	35
P9	30	34	P9	28	28
P10	34	40	P10	29	36
P11	35	36	P11	33	31
P12	33	29	P12	33	32
P13	36	37	P13	31	32
P14	30	35	P14	29	33
P15	31	32	P15	34	34
Mean	31.26	34.66		31.66	33.20

As can be observed in table 4.18, the pre-test scores of the study group for planning and preparing a lesson and its flow range from 24 to 36 whereas in the post-test their scores extend from 29 to 40. Furthermore, the difference in their mean scores between the pre-test and post-test reveals that their knowledge about lesson planning increased in a positive way (Pre-test $\bar{X} = 31.26$) (Post-test ($\bar{X} = 34.66$)) which could be inferred as the effect of self-monitoring activity implementation.

The baseline data of the control group for planning and preparing a lesson and its flow ranges from 29 to 36 and their knowledge stage in the pre-test is slightly over the study group (Pre-test $\bar{x} = 31.66$). In other words, both groups can be considered as somewhat similar in terms of their knowledge about lesson planning. However, the post-test result of the control group is slightly increased. There is only 1.54-point increase between the pre-test and post test scores.

In table 4.19, the individual scores of the participants about the second part of TKT module 2 is presented. This part of the module is particularly related with how teachers consult reference resources to get assistance in lesson preparation process.

Table 4.19

Individual Scores of Both Groups for Selecting and Utilising Resources and Materials

Study G.	Pre-Test	Post- Test	Control G.	Pre-Test	Post- Test
P1	30	28	P1	29	25
P2	30	30	P2	31	30
P3	27	29	P3	26	27
P4	31	33	P4	23	18
P5	33	35	P5	30	30
P6	26	29	P6	28	29
P7	28	26	P7	23	26
P8	28	32	P8	29	33
P9	28	30	P9	27	26
P10	30	33	P10	34	33
P11	30	37	P11	31	30
P12	27	33	P12	28	30
P13	24	33	P13	28	26
P14	29	31	P14	32	31
P15	30	35	P15	30	31
Mean	28.73	31.6		28.60	28.33

As the table indicates, the study groups' scores about selecting and utilising resources and materials for lesson preparation range from 24 to 33 before the practice of video analysis though the distribution of the scores ranges from 26 to 37 after the practice. Therefore, the difference between the mean scores of the pre-test and post-test augments in a constructive way (Pre-test $\bar{x} = 28.73$) (Post-test ($\bar{x} = 31.6$)).

On the contrary, the control groups' score difference between the pre-test and post-test is in a negative way (Pre-test $\bar{x} = 28.6$) (Post-test ($\bar{x} = 28.3$)). Even though the pre-test scores of the both groups are slightly similar, participants in the control group did not improve their knowledge about selecting and utilising language teaching resources and materials.

As an overall analysis of TKT module 2 based on descriptive results, it can be deduced that the study group increased its scores with a 6.26 point about planning and preparing a lesson and its flow and selecting and utilising language teaching resources and materials due to the implementation of the self-monitoring in the form of video recording and analysis. Instead, the change in the mean scores of the control group is only 1.27 points. Comprehensive analysis of the module 2 disclose that study group gains more knowledge on planning and preparing a lesson and its flow ($\bar{x} = 3.4$) than on selecting and utilising language teaching resources and materials ($\bar{x} = 2.87$) due to the implementation of the self-monitoring activity.

In contrast to the study group's considerable improvement, participants in the control group enhance their knowledge about planning and preparing a lesson and its flow and selecting and utilising language teaching resources and materials only 1.27 points. The improvement is observed particularly about planning and preparing a

lesson and its flow since there is a decrease about the knowledge of selecting and utilising language teaching resources and materials.

In addition to the descriptive analysis, Wilcoxon Signed Ranks Test was run to explore whether there was a significant difference between pre and post-test scores of both groups. In the tables 4.20 and 4.21, the results related with module 2 are presented.

Table 4.20.

The Results of the Wilcoxon Signed-Rank Test for Study Group Regarding the Pre and Post Scores of the Teaching Knowledge Test Module 2

Pre-test-Post test scores	n	Ranking Mean	Ranking Total	z	p
Positive rank	15	8.00	120.00	-3.413*	.001
Negative rank	0				
Equal	0				

*Based on negative ranking

In the table above, the results of the Wilcoxon Signed-Rank Test about TKT Module 2 indicate all the participants in the study group enhanced their scores. Furthermore, the test results present that the difference between the pre-test and post test scores is statistically significant. ($z = -3.41$ $p < .01$). Therefore, this finding can be interpreted that the use of self-monitoring in the form of video recording and analysis improved pre-service EFL teachers' knowledge of planning and preparing a lesson and use of resources and materials for language teaching.

In comparison with the study group, the result of the Wilcoxon Signed-Rank Test for control group is presented in the Table 4.21 below.

Table 4.21.

The Results of the Wilcoxon Signed-Rank Test for Control Group Regarding the Pre and Post Scores of the Teaching Knowledge Test Module 2

Pre-test-Post test scores	n	Ranking Mean	Ranking Total	z	p
Positive rank	9	8.56	77.00	-1.554*	.120
Negative rank	5	5.60	28.00		
Equal	1				

*Based on negative ranking

The test results about the shift of teacher knowledge for control group signify that nine of the participants in the control group improved their scores whereas five of them decreased their scores and one of them achieved the same score. Furthermore, the test results divulge that the difference between the pre-test and post test scores of the pre-service EFL teachers is statistically insignificant ($z = -1.55$ $p < .05$). Even though nine of the participants improved their knowledge about planning and preparing a lesson and selecting and utilising language teaching resources, the difference between the pre-test and post-test scores is not a statistically significant improvement.

As the study was experimental, Mann Whitney U-Test, as a non-parametric test, was run to determine if the medians of the test variable differed significantly between the study and control group. Table 4.22 below presents the test results.

Table 4.22

The Results of the Mann-Whitney U Test for Post-Test Scores of the Teaching Knowledge Test Module 2

Groups	N	Mean Rank	Sum of Means Rank	U	p
Study	15	19.73	296.00	49.00	.008
Control	15	11.27	169.00		

The Mann-Whitney procedure calculated the mean ranks and sum of ranks for the two groups compared. The U test indicates that there was a significant difference between the groups. The mean rank for the study group was higher (19.73) than the mean rank for the control group (11.27), indicating that the study group had better scores in the Teaching Knowledge Test Module II. Furthermore, the results reveal that the use of self-monitoring in the form of video recording and analysis yielded to a statistically significant difference between the groups ($U=49.000$, $p<.008$).

4.3.3 Descriptive analysis of the TKT module 3 for study and control group

In the presentation of the data related with the results of TKT Module 3, procedures used for TKT module 2 are followed. First, the overall descriptive results of the module 3 are shared and then the individual scores of the participants from each section, particularly “teachers’ language use in the classroom” and “classroom management” are demonstrated.

In the table below, the descriptive analysis of TKT Module 3 for study group is given.

Table 4.23.

Descriptive Results of Study Group for TKT Module 3

Study Group	N	Min	Max	Mps	Mean	Sd
Before Practice	15	44	62	80	55	4.75
After Practice	15	51	69	80	62.40	4.98

Note: Mps= Maximum possible score

In table 4.23, the overall scores of the participants in the study group before and after practice are presented. The results assert that participants in the study group improved their knowledge about “teachers’ language use in the classroom” and “classroom management” with a 7.4 difference in their mean scores. (Pre-test $\bar{x} = 55$) (Post-test ($\bar{x} = 62.40$)). Furthermore, the highest score in pre-test is also boosted from 62 to 69. These positive improvements can be the result of the treatment.

In the following table, the descriptive results of the control group about the themes covered in TKT module 3 are presented.

Table 4.24.

Descriptive Results of Control Group for TKT Module 3

Control Group	N	Min	Max	Mps	Mean	Sd
Before Practice	15	44	63	80	55.26	4.80
After Practice	15	47	66	80	58.13	5.74

Note: Mps= Maximum possible score

As can be understood from the table 4.24, the control group also advanced their knowledge about their language use in classroom and classroom management. However, the difference between the pre-test and post mean scores (2.86) is quite a little when it is compared with the shift in study group.

The overall change about the topics regarding teachers' language use in the classroom and classroom management is clarified in the figure below.

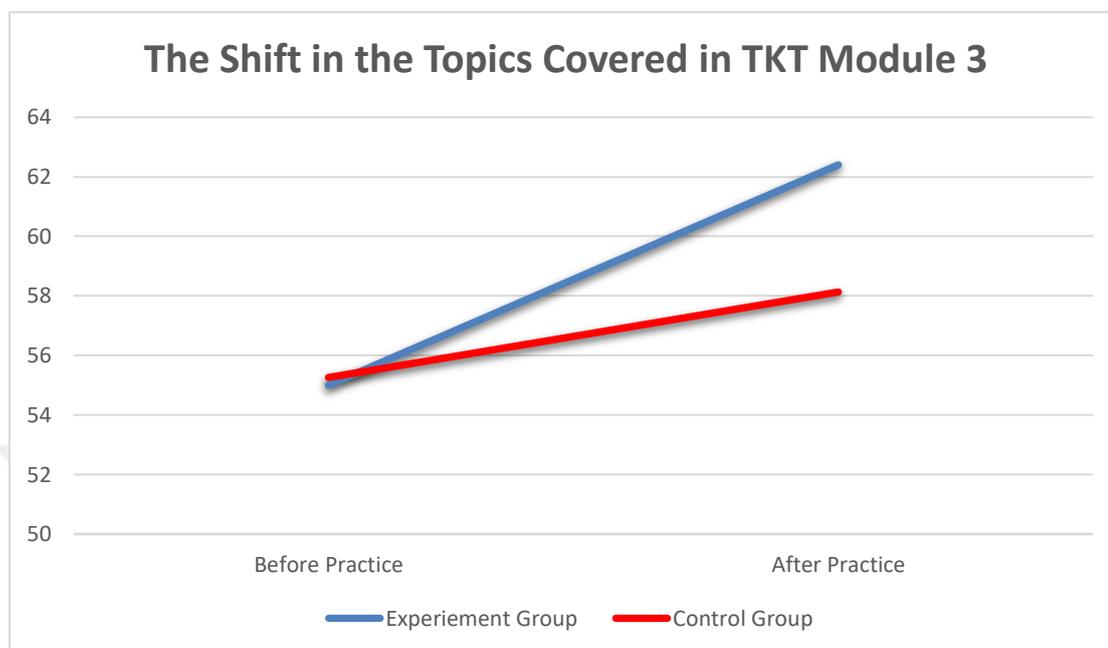


Figure 4.7. The comparison of the shift about the topics covered in TKT module 3

The concept of teacher knowledge is a complex entity and it is quite difficult to assess the influence of certain treatment on the overall development of teacher knowledge. However, the baseline data for both groups mentioned in tables 4.19 and 4.20 are almost identical (Pre-test score for study group $\bar{x} = 55$ and Pre-test score for control group $\bar{x} = 55.26$). Therefore, it can be assumed that the implementation of self-monitoring in the form of video recording and analysis made a difference on the post line scores of both groups.

As in module 2, module 3 also covers two separate sections about teacher knowledge. The questions in the first section aim to test participants' understanding the functions of classroom language, the adaptation of teachers' language according to

the students and their goals, how they assess their classroom language, how they scrutinise learners' language and how they classify learner mistakes. On the other hand, questions in the second section intend to assess participants' knowledge about teachers' role in an effective classroom management process. Therefore, it is necessary to investigate these sections independently to understand the effect of these sections individually on the gained score of the participants.

Table 4.25 presents the results of the TKT module 3 for study and control groups. It gives the descriptive statistics of both groups regarding the first section of the TKT module 3, which focuses on teachers' language use in the classroom.

Table 4.25.

Individual Scores of Both Groups for Teachers' Language use in the Classroom

Study G.	Pre-Test	Post- Test	Control G.	Pre-Test	Post- Test
P1	22	29	P1	22	25
P2	27	29	P2	29	32
P3	27	29	P3	26	25
P4	25	30	P4	27	28
P5	28	26	P5	28	30
P6	31	35	P6	25	28
P7	24	21	P7	25	23
P8	22	26	P8	31	33
P9	24	26	P9	27	24
P10	31	34	P10	26	30
P11	24	31	P11	28	22
P12	25	21	P12	23	26
P13	28	32	P13	24	19
P14	21	26	P14	23	30
P15	27	29	P15	27	31
Mean	25.73	28.26		26.06	27.06

As it is tabulated in table 4.25, the pre-test scores of the study group for teachers' language use in the classroom range from 21 to 31; however, their scores extend from 21 to 35 in the post-test. Moreover, the mean scores of the study group increase from 25.73 to 28.26. In other words, there is a 2.53-point difference between the pre-test and post-test of the mean scores.

The pre-test mean score of the control group is 26.06, which is so similar to the study groups' pre-test mean score. That is to say, both groups can be considered as identical in the beginning of the study. However, the shift related with the teachers' speech during the lesson for control group is only one points.

In the following table, the individual scores of the participants about the second section of TKT module 3 are presented in order to comprehend the influence of this section on participants gained scores in the whole module.

Table 4.26.

Individual Scores of Both Groups for Classroom Management

Study G.	Pre-Test	Post- Test	Control G.	Pre-Test	Post- Test
P1	28	33	P1	22	32
P2	30	34	P2	29	32
P3	32	37	P3	32	32
P4	33	31	P4	22	28
P5	27	34	P5	33	33
P6	31	34	P6	33	32
P7	29	30	P7	29	33
P8	29	34	P8	32	33
P9	20	34	P9	29	23
P10	27	34	P10	27	32
P11	34	35	P11	28	30
P12	28	35	P12	30	32

P13	30	37	P13	27	29
P14	29	34	P14	35	33
P15	32	36	P15	30	32
Mean	29.26	34.13		29.20	31.06

Table 4.26 demonstrates that the mean score of the study group about classroom management is 29.26 in the pre-test and 34.13 in the post-test. There is a 4.87-point score gain after the implementation of the self-monitoring in the form of video recording and analysis. Even though the baseline data of both groups is considered almost identical at the end of the pre-test, the control group's mean score increase is only 1.86 points. (Pre-test $\bar{x} = 29.20$) (Post-test ($\bar{x} = 31.06$)).

In the analysis of the TKT module 3, the study group outperformed the control group with a 7.4-point increase in the mean scores due to the implementation of the self-monitoring activity. Detailed analysis of module 3 reveals that participants augmented their knowledge about classroom management with a 4.87-point in their mean score as the shift in their knowledge about teachers' language use in the classroom was 2.53 points. In other words, it can be deduced that participants in the study group utilised this activity more to improve their classroom management skills.

On the other hand, participants in the control group improved their teacher knowledge regarding the teachers' language use in the classroom and classroom management with 2.86-points. Out of 2.86-point difference in the mean scores, 1.86-point difference is originated from the increase in their knowledge about classroom management and other 1-point increase belongs to the knowledge about teachers' language use in the classroom. Even though participants in the study group did not use self-monitoring, this finding is in line with study groups' improvement. In other words,

participants in the control group enhanced their classroom management skills more than their knowledge about teachers' language use in the classroom.

In addition to the descriptive statistics, a non-parametric statistical analysis, Wilcoxon Signed-Rank Test, was conducted to assess whether the difference between pre-test and post-test scores of the participants in the study group was statistically significant or not. Table 4.27 below demonstrates the results of this test

Table 4.27.

The Results of the Wilcoxon Signed-Rank Test for Study Group Regarding the Pre and Post Scores of the Teaching Knowledge Test Module 3

Pre-test-Post test scores	n	Ranking Mean	Ranking Total	z	p
Positive rank	14	8.50	119.00	-3.354*	.001
Negative rank	1	1.00	1.00		
Equal	0				

*Based on negative ranking

The results reveal that there was a statistically significant difference between the pre-test and post test scores of the participants in the study group regarding their knowledge on teachers' language use in the classroom and classroom management ($z = -3.35$ $p < .01$). Based on positive ranks, almost all of the participants improved their knowledge. In other words, it can be concluded that preservice EFL teachers improved their knowledge when they employed self-monitoring in the form of video recording and analysis.

Table 4.28 below demonstrates the results of the Wilcoxon Signed-Rank Test for pre-service EFL teachers in the control group related with their pre-test and post test scores about Teaching Knowledge Test Module 3.

Table 4.28.

The Results of the Wilcoxon Signed-Rank Test for Control Group Regarding the Pre and Post Scores of the Teaching Knowledge Test Module 3

Pre-test-Post test scores	n	Ranking Mean	Ranking Total	z	p
Positive rank	11	8.45	93.00	-1.877*	.060
Negative rank	4	6.75	27.00		
Equal	1				

*Based on negative ranking

The results indicate that 11 of the participants improved their scores but 4 of them got lower scores in the post test and one of the participant's score did not change. Furthermore, the test results reveal that there was no statistically significant difference between the pre-test and post test scores of the participants in the control group regarding their knowledge about teachers' language use in the classroom and classroom management ($z = -1.87$ $p < .05$).

The same procedure conducted for TKT module 2 was followed for the post-test scores gained from TKT module 3 to evaluate the mean ranks of the two groups to determine if they differed significantly from one another. The results are demonstrated in the Table 4.29 below.

Table 4.29.

The Results of the Mann-Whitney U Test for Post-Test Scores of the Teaching Knowledge Test Module 3

Groups	N	Mean Rank	Sum of Means Rank	U	p
Study	15	18.97	284.50	60.50	.030
Control	15	12.03	180.50		

The results obtained from the Mann Whitney U test indicate that the difference between the post-test scores of study and control group was statistically significant ($U=60.500, p<.030$). It can be interpreted that the implementation of self-monitoring in the form of video recording and analysis contributed to preservice EFL teachers' knowledge about their classroom language usage and classroom management. In other words, they improved their knowledge, skills, and attitudes about managing the teaching and learning process.

4.3.4 Analysis of written reflections about the shift in participants' teacher knowledge

In the section 4.3.1, quantitative findings related to the shift in participants' teaching knowledge owing to the implementation of self-monitoring in the form of video recording and analysis are presented. The results reveal that there was a statistically significant improvement in favour of the study group. However, there is a need to investigate the deeper feelings of the participants about the use of self-monitoring activity on the effect of teacher knowledge. Therefore, the data gathered by written entries were analysed through qualitative research techniques in order to support or reject the quantitative results of the study.

However, teacher knowledge is a broad term and it is complicated to define. As it is defined by Shulman (1986 p. 8), it is multifaceted, and it covers “content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners and their characteristics, knowledge of educational contexts, knowledge of educational ends, purposes, and values and their philosophical and historical grounds”. Therefore, in the analysis of the qualitative data related with the teacher knowledge growth, the concepts covered in the TKT Module

2 and TKT Module 3 were used as the base line for interpretation of the qualitative data in a deductive way. Accordingly, planning and preparing a lesson and its flow, selecting and utilising resources and materials for teaching, teachers' language use in the classroom and classroom management themes were used as the main categories of the analysis in order to provide support for the quantitative data.

For the data analysis of this section, the data were first analysed without considering these categories and numerous codes were created. Then, these codes were assigned to the predetermined categories. In addition to the predetermined categories, researcher classified the other statements as codes, which provide a base for the effect of self-monitoring activity to the improvement of teacher knowledge.

4.3.5 Analysis of written reflections regarding the concepts covered in TKT Module 2

The second module of TKT consists two parts, which separately focuses different teaching competencies. The first part of the module attempts to assess teachers' knowledge about planning and preparing a lesson by focusing on their beliefs and actions that they judge in the planning and preparing phase of a lesson. In the analysis of the written entries, statements stating the positive effect of self-monitoring activity on lesson planning process and statements which refer to the neutral or no effect of self-monitoring activity on lesson planning were coded. The frequency distribution of the statements is demonstrated in the table 4.30 below.

Table 4.30

Pre-Service EFL Teachers' Views on the Effect of Self-Monitoring on Planning and Preparing a Lesson

Views about planning and preparing a lesson	Frequency
Positive effect on lesson planning process	51
Total	49

As it can be understood from the table above, all the participants in the study group expressed that the use of self-monitoring in the form of video recording and analysis had a positive impact on their lesson planning process and they made use of getting feedback from their own video performances. None of the participants asserted that this procedure did not assist their planning and preparing a lesson plan process. An example of the positive effect stated by one of the participants is provided below.

"Self-monitoring certainly affects my following performances. It is not possible to see myself when I am teaching in front of the class. Video recording gives me a chance to observe myself, and I noticed that the students need more examples for the new grammatical structures. I planned the next lesson plan in this point of view and in a context based on active life". (Study Group, Male P 11, sixth reflective entry)

It is clear from the excerpt that eleventh participant stated that self-monitoring activity usage assisted his subsequent lesson plan procedure as he recognised what his students needed.

Another positive influence is stated by the ninth participants. She admitted that she would spend more time on material development and instruction writing to her lesson plan than she used to do because of video recording and analysis. The excerpt below is provided for the effect of self-monitoring activity use.

I believe that recording myself and trying to find my mistakes help me while preparing the lesson plan and the materials. As I realised in the recording, flashcards that I used in the lesson were not as effective as I thought and then I gave more importance to prepare the materials. In addition to that I really want to write the instructions to the lesson plan what I will say in the lesson because I saw in my video that I had

tough times to explain some rules or words that I thought that I could explain but I didn't in the class. In this way, I will have smoother lessons than before. (Study Group, Female P9, fourth reflective entry)

It is understood from the excerpt that she underestimated the value of writing instruction in her lesson plan till she realised her desperation in her recorded performance. Therefore, video based self-monitoring activity usage can be entitled as an eye-opener for pre-service teachers.

In addition to the lesson planning and preparing a lesson, TKT module 2 focuses on the resources that can guide teachers in planning process and developing functional materials for their lessons.

The analysis of written reflections reveals that some of the participants took the advantage of video self-monitoring for their selection and use of primary and supplementary language teaching resources and materials. However, some of them asserted that this process did not affect their knowledge or beliefs about the material and resource selection and use process. The frequency of their responses is demonstrated in the table 4.31 below.

Table 4.31.

Pre-Service EFL Teachers' Views on the Effect of Self-Monitoring on Selecting and Utilising Resources and Materials

Views about selecting and utilising resources and materials	Frequency
Has a positive effect	27
Has a negative effect	18
Total	45

As displayed in Table 4.31, participants commenting on the positive effect of video based self-monitoring activity over material and resource selection and use outnumbered the ones who stated that it did not affect. The following excerpt is a sample of the positive effect.

That is what I exactly infer from my video recording. It is beyond any doubt that selection and use of resources and materials will take its shape with the help of our experiences. We can say that we gain experience day by day and thanks to video recording as a self-monitoring activity, we witness directly what works well in the classroom. Considering each variable, we have a clear idea about what a book should include and how we can adopt and make it more appropriate for students. (Study Group, Male P10, fifth reflective entry)

It is clear from the excerpt above that this participant was directly influenced by using self-monitoring in the form of recording and analysis as this process enabled them to gain more experience of teaching. It is understood from his words that an experienced teacher can be more effective in selecting and use of resources by the help of video self-reflection since he or she can consider a lot of variables affecting teaching at the same time.

On the other hand, some of the participants stated that video recording and analysis as a self-monitoring activity did not affect their course book or supplementary material and activity selection as everything was provided by the smart board, selected course book or supervisor teacher. The participants could not feel themselves free in selection of teaching materials in this process. Two of the participants expressed this negation as:

I did not have a chance to choose my materials because all the required things are involved in the smart board. (Study Group, Male P12, third reflective entry)

Actually, I did not have many choices while I was planning to choose my materials because the topic was grammar focused and we were asked to follow course book. (Study Group, Male P10, second reflective entry)

For a better illustration of the situation, participants' comments on selection and use of teaching resources are given in percentages in the figure 4.8 below.

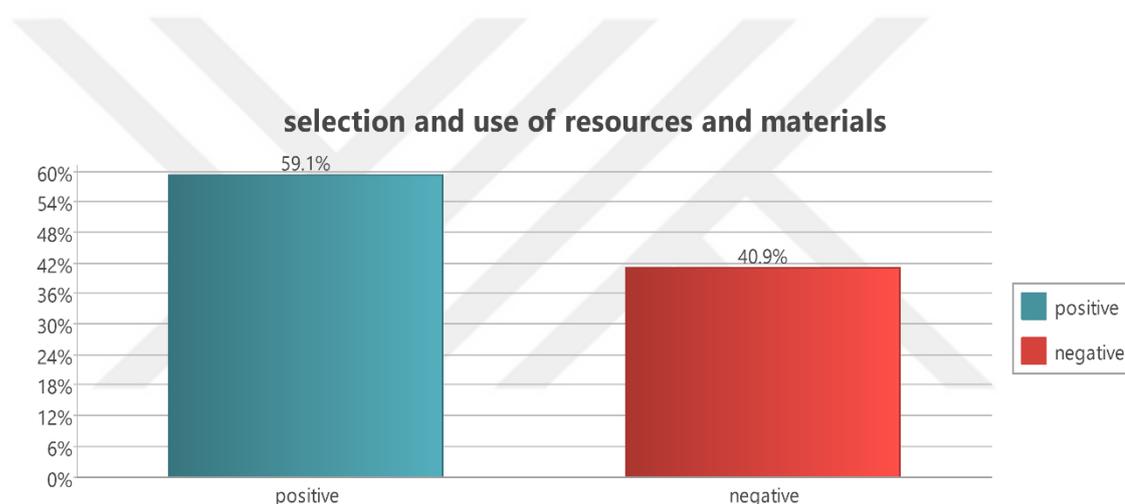


Figure 4.8. Pre-service EFL teachers' views about the effect of self-monitoring on selection and use of resources and materials

As can be observed in figure 4.8, the results of the qualitative analysis revealed that 59,1 % of the responses involved positive statements about the use of video self-monitoring. 40,9 % of the statements involved negative statements and these negative views were mostly related with the curriculum restrictions of the practicum school. In other words, not the self-monitoring in the form of video recording and analysis had some negative effects on selection and use of resources, but it was the pre-ordered materials and resources in the state schools.

4.3.6 Analysis of written reflections regarding the concepts covered in

TKT Module 3

Like Module 2, TKT Module 3 is also formed by two parts including 40 questions for each. In general, this module attempts to assess the teachers' knowledge of what happens in the classroom. The first part of the module particularly focuses on teachers' language use in the classroom. The analysis of written reflections unveiled some positive contributions of the use of self-monitoring on their teaching knowledge concerning the use of teachers' language in the classroom. Table 4.32 demonstrates the areas that they improved by the implementation of video-based self-monitoring activity.

Table 4.32.

Pre-Service EFL Teachers' Views on the Effect of Self-Monitoring on Teachers' Language use in the Classroom

Views about teachers' language use in the classroom	Frequency
Giving instructions	32
Grammatical errors	13
Conveying meaning of new language or rule	11
Checking instructions-understanding	10
L1 Usage	9
Pronunciation errors	8
Encouraging- expressing support	7
Inappropriate use of language	7
VA reduces my public speaking anxiety	4
Total	101

As displayed in the table 4.32, participants reacted on nine topics that they believed to improve skills about their classroom language in a positive way. The most

frequent cited topic that they took advantage of the use of video based self-monitoring activity was giving instruction. The participants claimed that they became aware of their language in giving instructions while watching their video recordings and changed some of them for the next performances. One of the participants expressed her feelings about the issue as:

My former performances help me to develop my instructions of course. Before video recording, while I was giving instructions, I was using some stereotypes sentences, and then I realised that students did not understand all my words. Thanks to video I added some more techniques to my instructions such as demonstrating instructions, changing my words, and trying to make my instructions more understandable for my students. So, in planning stage, while I am designing the lesson plan, I also think some different explanations in case my students do not understand for the first and second time. (Study Group, Female P1, sixth reflective entry)

In this statement, participant commented on how she changed her style about giving instructions and transformed a better model for teaching. It can be concluded that giving instruction was the popular topic, which pre- service EFL teachers thought that they needed more practice about it and implementation of video based self-monitoring fostered their teaching knowledge about it.

In addition, participants asserted that they struggled in sequencing their instructions and their students did not understand what they would do in the classroom, which caused frustration. The following excerpt exemplifies the situation.

Another problem that I realised in my videos is giving instructions. I need to be more careful about the sequence of my instructions for the activities. I observed that I talked as if I was in a hurry and realised

that students were confused and sometimes they seemed they lost their focus. (Study Group, Female P9, ninth reflective entry)

This excerpt provides evidence about the benefit that pre-service teacher got from the video analysis process as it brought them a stress-free environment in which they could analyse their utterances without the fear of making mistakes or feeling ashamed.

Other recurring theme about teacher knowledge is grammatical errors. As giving instructions is the most frequently cited problem that pre-service teachers need to focus on, it is usual to have the grammatical errors on the top of the list. While they are trying to give clear and comprehensible instructions, they can easily violate the grammatical rules. By the help of self-monitoring, participants realised their mistakes in their classroom language and they tried to improve their weaknesses about it. One of the participants' enlightenment about the grammar mistakes that he did in classroom is provided in the following excerpt.

While I was teaching in the classroom, I could not be aware of what I said or what I did not. I sometimes confused the pronunciation of a word or I could make some grammatical errors. While watching my third performance, I realised that I made some serious errors such as right or false and look at she; instead of right or wrong and look at her. I will be more careful about my next performance. (Study Group, Male P3, second reflective entry)

It is clear in the excerpt that participants' awareness is increased. He started to discover his grammatical mistakes in his speech while watching his performance.

The second part of the TKT module 3 primarily addresses teachers' role in the classroom and how they can manage the roles that a teacher can accomplish. The

analysis asserts that participants took the advantage of video recording and analysis as a self-monitoring activity on the topics mentioned in the table 4.33 below.

Table 4.33.

Pre-Service EFL Teachers' Views on the Effect of Self-Monitoring on Classroom Management

Views about classroom management	Frequency
Giving feedback	31
Losing control & maintaining authority and discipline	18
Strategies for correcting learners	17
Reaction to the students who are not involved	12
Position in classroom	11
Voice control in the classroom	9
Monitoring students	7
Board usage	6
Group Work-Pair work	3
Total	114

As presented in the table 4.33, participants in the study group stated that they profited from video recording and analysis as a self-monitoring activity on nine topics about the competency of classroom management skills. Among them, the most frequently addressed topics that pre-service teachers believed to improve their teaching knowledge are giving feedback, losing control and maintaining authority and discipline, and strategies for correcting learners.

The use self-monitoring activity can provide a base for pre-service teachers to foster their verbal and visual feedback as they could particularly focus on their utterances and their facial expressions during video analysis. As pre-service teachers of the study did not have the opportunity to teach in real classroom settings before teaching practice course, their ability of providing feedback to their learners was

undeveloped and it was just based on theoretical assumption. However, through video analysis, participants realised their weakness about giving both verbal and facial feedback. Two selected excerpts about its positive impact are provided below.

As I realised in the video, I repeated the word ‘okay’ again and again while giving feedback, making them listen to me or keeping quiet. It is normal to a degree but then it seems irritating. For the next lessons, I will pay attention to use different words for giving feedback. (Study Group, Female P5, fifth reflective entry)

As a reflection, the participant in the excerpt above recognised the importance of using different word choices for providing feedback to learners as it sounded irritating.

Providing feedback was one of my weaknesses for my previous performances as I generally tended to use same expressions such as “yes”, “good”. But the worst thing that I realised in my video was about my facial expression while giving feedback to the learners. While I was saying yes, my face in fact did not support my words. I understood that I just wanted to finish the activity and I did not pay much attention whether they were learning or not. In my next performance I try to improve this. (Study Group, Male P10, seventh reflective entry)

In this excerpts, participant expressed that he raised his awareness about giving feedback both in verbal and visual ways. He confessed that he his face did not have a harmony with his words while providing feedback which could be considered as the impact of the implementation of self-monitoring in the form of video recording and analysis.

Another most frequently cited benefit of video based self-monitoring activity usage is about losing control and maintaining authority and discipline. It can be a foreseen problem for pre-service teachers to have discipline problems in the

classroom as they do not spend much time in real classroom settings. However, the crucial thing is that some of them improved their abilities regarding this issue due to the implementation of video self-monitoring process. In the excerpt below, an illustration of this benefit is presented.

In the first presentation, I was also a little bit anxious and it affected some of my management skills. When I watched my record, I noticed that I shouted as “hişşşt” a lot to calm down the class and I touched my lips and hair a lot as I felt uncomfortable and nervous. So, I tried to stay calm in my next performance and I was more relaxed than my first performance. (Study Group, Female P8, fourth reflective entry)

In the cosy classroom atmosphere, it is not easy to recognise all the incidents that bother you as a teacher. Participants in the excerpt above stated that self-monitoring in the form of video recording and analysis provided him the chance of viewing his teaching experience over and over where he recognised his behaviours, attitudes and facial expressions when he lost the control of the classroom. In other words, video analysis provided a mirror to them which enabled them to analyse their classroom management skills with different angles.

4.4. Summary of the Chapter

This chapter presents findings from the analysis of the data gathered by means of quantitative and qualitative approaches. Quantitative data collected in a pre-test post-test design was analysed to observe the effect of video based self-monitoring activity use on pre-service teachers’ reflectivity growth and teacher knowledge growth. Statistical analyses were carried out to determine the influence of self-monitoring on pre-service teachers’ reflectivity levels and their teacher knowledge growth within the groups and between the groups. Qualitative data was

analysed to reveal the insights of the pre-service teachers about the implementation of video based self-monitoring on their reflectivity levels and teaching competencies and to find any support for the quantitative data. Furthermore, the cases were examined in order to find any evidence about the shift in the reflectivity level of the participants at the individual level. Overall, both the quantitative and qualitative findings indicated that use of self-monitoring had an influence over pre-service teachers' reflectivity levels and their teacher knowledge progress.

The next chapter interprets the findings within the framework of research questions by referencing similar research studies mentioned in the literature and it provides conclusions and implications for further studies.

CHAPTER 5

DISCUSSION and CONCLUSIONS

5.1. Introduction

This study is planned to explore the influence of self-monitoring in the form of video recording and analysis on pre-service EFL teachers' reflectivity levels and their professional knowledge growth in terms of planning and preparing a lesson, selecting and utilising language teaching resources and materials, teachers' classroom language usage, and classroom management. The purpose of this chapter is to present a discussion on significant findings concerning the research questions and other findings that emerged from the data by comparing them with related literature and provide conclusions and implications.

5.2. Overview of the Study

Since teacher education programmes have been searching for novel ways of supporting pre-service teachers' learning the complex teaching profession, which prepares them for real teaching settings, reflective practice as a way of teacher learning is considered as a saviour angel which promotes pre-service teachers' pedagogic knowledge, pedagogic content knowledge, skills, attitudes, and expertise. Reflection as a way of self-appraisal is the critical examination of one's thoughts, ideas, and actions to improve his/her teaching. However, there are several ways of reflecting on our own actions. Self-monitoring in the form of video recording and analysis is one of those ways, which fosters understanding one's own strengths and weaknesses as an outside observer, and it leads to the professional growth of teachers.

The overall purpose of this study was to investigate how the use of video recording and analysis as a self-monitoring activity altered pre-service EFL teachers' reflectivity level and whether it had an influence on their professional knowledge related with teaching competencies. In this sense, a convergent parallel design in which the effect of this activity was assessed with a control group was employed to address the purpose of the study. The study was carried out at an ELT department in Turkey with thirty senior pre-service EFL teachers who were selected by the random sampling strategy. Fifteen of them were appointed to the study group and the other fifteen were assigned to the control group. Having been trained in the use of video recording and analysis as a self-monitoring activity, participants in the study group employed this activity in their teaching practice course and reflected their performances by writing reflective entries while the control group did not have any training about self-monitoring and did not employ it in their teaching practice course, but they prepared a reflective portfolio based on their real time observation. In this way, both groups' reflectivity levels and their professional knowledge were assessed to test the effect of video recording and analysis as a self-monitoring activity in a pre-test and post-test design. Furthermore, the study group's reflective entries were analysed within the framework proposed by the research questions to gain a deeper understanding of the issues and to support the quantitative results that emerged from the pre-test test and post-test design. Apart from specific findings of the study, which are discussed in the following section, it is crucial to highlight that all the participants in the study group stated that they found self-monitoring as a reflective activity highly effective and convenient to realise their own strengths and weaknesses. In other words, they claimed that the implementation of this process not only updated and

transformed their knowledge of teaching, but it also created a venue for their knowledge of technology integration into their classrooms to achieve better practises.

5.3. General Findings of the Study

The overall results of the study state that self-monitoring in the form of video recording and analysis as a reflective activity supports pre-service teachers' professional development. More specifically, the study provides clear and convincing evidence that video-based self-reflection is a robust action for self-authorship, which leads to a better teaching performance for pre-service teachers. In this section, main findings of the study are discussed by following the sequence of research questions.

5.4. Discussion of Findings about the Shift in Reflectivity Level of Pre-Service Teachers

Research Question 1: Does the implementation of video based self-monitoring have an effect on the reflectivity level of pre-service EFL teachers?

The study initially explored the effect of video analysis use on pre-service teachers' reflectivity levels in an empirical way. Both quantitative and qualitative findings proposed a shift in the reflectivity level of the participants in the study group. In other words, pre-service teachers improved their reflectivity due to the implementation of self-monitoring activity and moved forward along the hierarchy of reflection. Since the quantitative and qualitative findings were analysed individually, the shift became clearer.

The quantitative findings of the study unveiled that the increase in the reflectivity level of the participants in the study group was statistically higher than the control group. This can be explained by the effect of training and implementation of

video recording and analysis as a reflective activity. In fact, this finding corresponds with Dewey's famous quote "we do not learn from our experience, but we learn from reflecting on experience (1933, p. 78), as he suggests that experience alone does not lead to professional growth unless it is reflected on. Even though each group spent approximately similar amounts of time in practicum schools, the participants in the study group enhanced their reflectivity level more. They, therefore, availed themselves of this experience by reflecting on their performance, and they became aware of several aspects of teaching, not only their own actions as a teacher but students' acts as learners, materials and activities as teaching tools which aided them in connecting theory and practice. In other words, they began to transform into a reflective practitioner, which is a common goal for teacher education programmes.

Quantitative findings regarding the outset of the study revealed that both groups were at the contextual level according to the framework of Taggart and Wilsons (1998), which means that they were aware of their behaviours and actions related with teaching and learning and they had the ability to relate theory to practice. In other words, they tried to find alternative ways for solving problems encountered in a classroom environment. This finding could be related with their previous reflective activities that they employed for other courses in the programme. However, the pre-service teachers in the study group promoted their reflectivity to the next level, called the dialectical level, whereas the ones in the control group remained at the same level. The shift in reflectivity level could be credited to the time spend in training and implementation of the self-monitoring in the form of video recording and analysis, which took a full academic year. In other words, video based self-monitoring activity changed their perspective of classroom observation and they started to see the big picture covering both their own and the students' actions, the atmosphere in the

classroom, the materials and activities used in teaching, and students' responses. In short, video based self-monitoring activity improved pre-service teachers' reflective thinking and their reflectivity levels. This finding was in line with the results of previous research studies (Brophy, 2004, Penny & Coe, 2004; Romano & Schwartz, 2005; Whitehead & Fitzgerald, 2007; Harford & MacRuairc, 2008; Rich & Hannafin, 2009; Tripp & Rich, 2012; Calandra, Brantley-Dias, Lee, & Fox, 2009; Picci et al., 2012, Sayın, 2013; Eröz-Tuga, 2013; Arya & Christ, 2013). Nevertheless, most of the studies conducted on the effect of video use on teachers' reflectivity levels were based on peer or group video-recording and collaborative reflection while studies investigating the effect of video use on individual reflection were few (Marsh & Mitchell, 2014). Consequently, the present study would contribute to the literature.

In other words, it can be concluded that the present study compared the effect of video aided self-observation with real time observation as both study and control group reflected on incidents that they encountered in their performances; however, one was based on video recording an analysis and the other one was based on memory. The quantitative findings of the study conclude that self-monitoring in the form of video recording and analysis was more effective than traditional reflection as the study group enhanced their reflection level more than the control group. These results are consistent with the results of previous studies (Tripp,2009, (Miller & Carney, 2008; Rich & Hannafin, 2008; Wright, 2008) in which the improvement of reflection with video self-reflection and traditional observation-based reflection were compared.

In addition to the statistically significant improvement which is in favour of study group, it is necessary to mention that the statistical analysis of the difference within the groups concluded that there was positive improvement between the pre-test

and post test scores of the control group. Even though the enhancement of the reflectivity level was found less in the control group, this improvement was statistically significant. Consequently, it is crucial to highlight that traditional observation-based reflection is also influential in promoting the reflectivity level of pre-service EFL teachers. In fact, it is extremely difficult to assess the effect of any treatment regarding reflectivity in any teacher education context as there can be many confounding factors contributing the development of reflectivity such as background, content of reflection, context of reflection (Lee, 2005). Therefore, some other activities might be provided to the control group as a placebo treatment in order to make a comparison between the effect of video based self-monitoring and other reflective practices.

Nevertheless, the literature suggests that the regular implementation of reflective activities following a systematic training would contribute more to the reflectivity level of teachers (Fakazlı & Gönen, 2017, Lakshmi, 2014, Gün, 2011). Therefore, the training and implementation of self-monitoring in the form of video recording and analysis in a systematic fashion could be used to interpret the superiority of the study group's performance over control group's scores.

On the other hand, assessing the level of reflection with only quantitative measures is sometimes somewhat limited. As participants were required to choose between statements related with the research topic, they could not express their own feelings, ideas, and opinions (Erten, 2015). Therefore, it was essential to conduct qualitative research in order to support the quantitative findings.

The overall findings of the qualitative research regarding reflectivity level were consistent with the quantitative results and EFL pre-service teachers' reflective

levels in the study group increased from lowest level to highest level. In the beginning of the study, much of the reflective entries were at the technical level and the rest was at the contextual level. In other words, none of the participants produced any reflective entry at the dialectical level which support the quantitative results of the study.

The surprising result regarding the reflectivity level of the participants is about their starting point. In the beginning of the study, the quantitative results indicate that participants were at the contextual level, which is the second level in Taggart and Wilson's framework, while the qualitative results point that most of the reflective entries were at the initial level, i.e. technical. The reason of this difference can be interpreted by the production time of reflective entries. While grouping the reflective entries, two written reflections produced during the training section included to the study as the outset data. As reflectivity growth has a hierarchical structure, it could be acceptable to have more entries at the technical level.

Another interpretation of this difference can be related with social desirability bias. Paulhus (2002 cited in Erten, 2015) refers to the term as participant's tendency of responding the quantitative test items untruthfully in order to be accepted socially more desirable. Therefore, this finding overlaps with Erten's discussion on employing quantitative and qualitative instruments for assessing the same topic (2015). For the analysis of reflective thinking, which refers to the deep understanding of teachers, quantitative methods cannot be the only alternative; qualitative analysis of journals and video recording should also be employed as they elaborate and describe at first hand their experiences (Burrows, 2012). As a result, it can be concluded that quantitative data collection and analysis for assessing the shift in the reflectivity level of the pre-service EFL teachers is necessary, but it is not sufficient.

Apart from the difference between the quantitative and qualitative findings at the outset of the study, qualitative findings at the start of the study were similar to the results of previous research (Hatton & Smith, 1995; Halter, 2006; Taggart & Wilson 2005; Wright, 2008; Liakopoulou, 2012; Cohen-Sayag & Fischl, 2012; Garza & Smith, 2015). Related studies state that pre-service teachers have not yet developed their routines as they are just at the starting point of their career. They make simple descriptions of observations or they just reflect on isolated incidents that are disconnected from problem solving, so they mostly reflect at the technical level, according to the reflection pyramid provided by Taggart and Wilson (2005). Even though most of the reflections were at the technical level at the outset of the study, participants started to produce more reflective entries at the contextual level as the study progressed and they improved their reflectivity level throughout the study by implementation of self-monitoring in the form of video analysis, which could be considered as compelling evidence of the effect of video analysis on pre-service teachers' reflectivity levels. In other words, almost all of the participant reflected at the dialectical level at once at the end of the study which provides evidence for the quantitative results. By focusing on their classroom performance and considering the planning and preparation phase, they started to be more concerned about their teaching process and this led to the enhancement of their reflectivity level. The development of their reflective skills could also cultivate their pedagogical knowledge and in this way, the transition period from being a novice to expert teacher might be fostered.

As Lee (2005) states that the shift in the reflectivity level of pre-service teachers depends on a range of factors and personal background is the most influential one which affects reflectivity level. Therefore, each pre-service teacher's reflective

growth might be different. Thus, reflective entries based on video analysis were investigated individually in order to understand whether the overall statistical enhancement was welded by certain participants' scores or whether it was originated from the whole group. The analysis concluded that almost each participant reflected on his or her performance at the dialectical level at least once until the end of study. Even though there were leading participants who contributed to the overall statistical results, the outstanding finding was the amount of reflective entries produced by these participants throughout the study. In other words, it can be concluded that self-monitoring in the form of video recording and analysis triggered the reflective thinking of some participants more than others; and this could be explained by the background factor proposed by Lee (2005). Consequently, qualitative data supports the quantitative data in terms of reflectivity growth of pre-service teachers but the distribution of individual growth on overall growth is somewhat different as some participants benefited more to improve their reflectivity level.

As is mentioned often in the literature, reflection, reflective practice, or reflective teaching are the strategic terms for the transformation of teachers from novice to experts. Pre-service teacher education is the initial point of this transformation process. However, the courses provided in teacher education programmes are insufficient to improve their reflective thinking skills, as it requires a real classroom atmosphere. Therefore, the implementation of self-monitoring activity in teaching practice is of paramount importance.

The second focus of the study was to assess the influence of self-monitoring in the form of video recording and analysis on pre-service teachers' professional knowledge by answering the following research question.

5.5. Discussion of Findings about the Shift in Pre-Service EFL Teachers'

Knowledge

Research Question 2: Does the use of video based self-monitoring have an effect on the competencies of pre-service EFL teachers in terms of their knowledge on the following concepts;

- a) Planning and preparing a lesson
- b) Selecting and utilising resources and materials
- c) Teachers' language use in the classroom
- d) Classroom management

If so... How?

With this aim in mind, the shift in the competencies of pre-service teachers was analysed both quantitatively and qualitatively. The quantitative analysis was conducted as a pre-test and post-test design by comparing the results of both groups. Qualitative analysis was carried out with reflective entries based on video analysis of the participants in the study group. Like reflective practice, the competencies that an expert teacher should have is a complex issue; therefore, analyses focused on only two areas, as specified in the research question. The first includes planning and preparing a lesson and the selecting and utilising language teaching resources and materials while the second is related with teacher's language use in the classroom and classroom management.

Quantitative analysis concluded that the implementation of self-monitoring in the form of video recording and analysis improved pre-service teachers' competencies

regarding planning and preparing a lesson and selection and use of resources and materials when the scores of the participants were compared with the results of participants in the control group. In fact, both groups improved their competencies of teaching due to the inclusion of teaching practice. They had the opportunity to practice the declarative knowledge that they had gained throughout their education and started to transform it into procedural knowledge. However, the use of self-monitoring in the form of video recording and analysis fostered this process. This finding was in line with McCullagh and Corscadden's study (2013). Even though their study was done with pre-service Science and Maths teachers, they found that the use of video as a reflective activity developed pre-service teachers planning and teaching skills and the use of video analysis as a reflection tool had a profound effect on their future career.

The effect of video analysis as a self-monitoring activity on both groups' teaching competency improvement was investigated in separate sections as well. The analysis investigated which of the teaching competencies improved most, specifically, planning and preparing a lesson and the selecting and utilising language teaching resources and materials. The result indicated that participants in the study group enhanced their skills and knowledge of planning and preparing a lesson and its flow more than their skills and knowledge of the selection and use of language teaching resources and materials. Pre-service teachers exposed to video recording and analysis as a reflective activity improved their teaching competencies more than those who just followed the basic requirements of the teaching practice course.

As is stated in the literature, video analysis as a reflective activity fosters the ability of professional vision (Sherin, 2002; Sherin & Van Es, 2005; Snoeyink, 2010; Kleinknecht & Schneider, 2013). However, it is an overly complex skill to be

acquired, particularly by pre-service teachers, but they can be trained. In this way, they start to “notice” complex classroom events and develop their awareness of classroom management issues and this ends up with an improvement in their reflectivity level and professional knowledge. Qualitative analysis of the written reflective entries presented equivalent results to the quantitative results. Since video provided a chance to observe them from a different angle, participants exposed to video analysis stated that they then understood why they had spent so much time on preparing a lesson plan. One of them exemplified the situation as follows:

I always think that writing some parts of the lesson plan such as anticipated problems are unnecessarily boring but when I watch my video I understand the reason as I see myself helpless in some situations. In my next lesson plan, I will devote much more time on this section. (Study Group, Male P 14, sixth reflective entry)

In the study setting, pre-service teachers were required to use a comprehensive lesson plan template and they often complained about writing everything in detail. This extract could be considered as a proof of the impact of self-monitoring in the form of video recording and analysis on pre-service teachers’ lesson planning skills as it provided them with a mirror. This finding is similar to Kuter, Gazi & Aksal's (2012) study in which they explored the effect of collaborative discussion based on video-recorded microteaching. Their study revealed that video-based collaborative discussion improved teacher knowledge, especially on planning a lesson.

Analysis of the reflective entries concluded that each participant felt positive about the use of self-monitoring in the form of video recording and

analysis as they mentioned it 51 times in their writings. None of the participants claimed that the implementation of self-monitoring activity had a negative or neutral effect on the lesson planning process. Evidence of this positive outcome can be seen in the reflections of the 11th participant.

"Self-monitoring certainly affects my following performances. It is not possible to see myself when I am teaching in front of the class. Video recording gives me a chance to observe myself, and I noticed that the students need more examples for new grammatical structures. I planned the next lesson plan within this point of view and in a context based on real life". (Study Group, Male P 11, sixth reflective entry)

In this excerpt, pre-service teacher confessed that video recording and analysis as a self-monitoring activity was enhanced his noticing ability about his students needs and it influenced his lesson planning process.

The comparative results of the quantitative analysis indicated that knowledge about planning and preparing a lesson was improved more than knowledge about the selecting and utilising resources and materials. The qualitative analysis outcomes were in line with these. Participants' views on the impact of video analysis on their knowledge of the selecting and utilising the course book and extra materials and activities were positive. However, a considerable number of views about the effect of video analysis was negative or neutral. Some asserted that they were not free to choose their materials, course books or activities as they were forced to follow the routines of the practicum schools. In those schools, students were using smart boards in which the course books and other materials were installed. One participant mentioned this in his reflective entry as follows.

I did not have a chance to choose my materials because all the required things are involved in the smart board. (Study Group, Male P 12, third reflective entry)

Therefore, contradictory comments about the effect of self-monitoring activity usage on the competency of selecting and utilising resources and materials arose from other factors influencing the process. In this sense, it could be concluded that pre-service teachers did not feel themselves free to create and employ their own activities on the teaching practice course, a point which should be taken into consideration carefully.

The other quantitative analysis was conducted on the growth of competencies regarding teachers' language use in the classroom and managing the teaching and learning process. Comparable results to the first analysis were reached. Pre-service teachers in both groups improved their knowledge and skills about their language use in the classroom and classroom management because of hands-on experience in a real classroom setting. It was their first opportunity to practice their theoretical knowledge in a real classroom setting and the experience gained from this process influenced and improved their procedural knowledge. However, the participants' implementation of self-monitoring in the form of video recording and analyses advanced their teaching competencies more than those who did not use it. This finding can be compared to Dewey's famous quote that "we do not learn from our experience, but we learn from reflecting on experience (1933, p. 78). It can be concluded that any experience being reflected upon may contribute to our knowledge more than just the experience itself. Furthermore, studies conducted with pre-service teachers concluded that they matured professionally by reflecting on their experience (Minott, 2008; Orlova, 2009; Rich & Hannafin, 2009).

In addition to the overall analysis on the effect of video based self-monitoring over teacher's classroom language usage and classroom management, their contribution to the total impact was analysed individually. The findings revealed that pre-service teachers improved their classroom management skills and strategies more than their language usage in the classroom.

Along with the statistically positive outcomes, qualitative analysis regarding the effect of self-monitoring in the form of video recording and analysis on pre-service teachers' knowledge growth revealed how this activity affected their classroom language and classroom management skills. The coding of the positive statements on the teachers' language use in the classroom showed that implementation of the self-monitoring influenced their skills in nine themes. These are: "giving instructions, grammatical errors, conveying meaning of a new language or rule, checking instructions-understanding, L1 usage, pronunciation errors, encouraging-expressing support, inappropriate use of language, and reducing public speaking anxiety". Among these, the most influenced skill related to their classroom language was "giving instructions". Even though they had prepared detailed lesson plans and were required to write their instructions on the plans, they stated that the implementation stage was totally different and frustrating. As they were in the process of developing their routines, they were anxious about completing the tasks in the planned time and tried to teach an effective lesson. They therefore easily lost control of time and their utterances, mangled their instruction sequence, and made many silly mistakes in their speech. However, they could not recognise them in the cosy classroom atmosphere as their focus was not on themselves but on their tasks. A participant exemplified the situation as follows.

Another problem that I realised in my videos is giving instructions. I need to be more careful about the sequence of my instructions for the activities. I observed that I talked as if I was in a hurry and realised that students were confused and sometimes they seemed to have lost their focus. (Study Group, Female P 9, ninth reflective entry)

Over and above the positive improvement of teachers' language use in the classroom, qualitative analysis revealed individual understanding of the effect of video based self-monitoring on pre-service teacher classroom management skills. Classroom management is a highly complex skill, which requires the control of several variables at the same time. However, the development of this skill takes time and teaching practice is the only place for students to practice their theoretical knowledge. Even though they spend hours preparing a detailed lesson plan, they may fail to reach their objectives if their classroom management skills are weak.

Classroom management is the skill which fosters the professional development of teachers and its importance is emphasized in the literature, but pre-service teachers are provided with feedback about their performances only in the form of do's and don'ts by their mentor teachers and university supervisors. Most of the pre-service teachers perceive the teaching practice course as a course to be passed and focus on their instant performance and do not reflect on their teaching, which takes them a step further. Therefore, self-monitoring in the form of video recording and analysis is critical for pre-service teachers' initial professional development.

The qualitative results supported the quantitative findings, which revealed the positive effect of this activity implementation on pre-service teachers' classroom management skills. In other words, qualitative analysis provided insights of the improvement on classroom management issues. In the qualitative analysis, pre-service

teachers highlighted nine classroom management themes in which they made use of self-monitoring regarding classroom management skills. These themes were ranked according to their frequency as “giving feedback, losing control, maintaining authority and discipline, strategies for correcting learners, reaction to students who act as uninvolved in the lesson, position in the classroom, voice control in the classroom, monitoring students, board usage, and group work-pair work”. This finding somewhat overlaps with that of previous research (Rich & Hannafin, 2009; Calandra, Brantley-Dias, Lee, & Fox, 2009). In a study on the use of web-enabled video on pre-service teachers’ self-reflection skills, Kong (2010) investigated the improvement in pre-service teachers’ self-reflections based on a framework which involved four dimensions. These are: “curriculum planning and evaluation, pupil-pupil and pupil-teacher interaction, discipline and classroom management, and professional knowledge on teaching” (Kong, 2010, p. 1772). The study concluded that pre-service teachers produced entries that are more reflective after video browsing on their recorded performances for each dimension. The discipline and classroom management dimension were second following the curriculum planning and evaluation dimension.

In the present study, giving feedback was the most frequently highlighted skill that they improved due to the implementation of self-monitoring activity among these nine themes. Most of the participants pinpointed that they understood and applied “giving feedback” in a wrong manner. They confessed that through self-monitoring in the form of video recording and analysis, they realised some of their utterances were unfruitful and consisted of repetition of the same words. The following extract exemplifies the situation.

As far as I watched my performance, when I get the answers, I did not give enough feedback. My answers were like “Okay, thank you, right...” Most of the time, I confirmed their answers. But I should have given more positive reinforcement in order to raise their self-confidence. (Study Group, Female P 15, fifth reflective entry)

Another study conducted in the Turkish ELT context (Eröz-Tuğa, 2013) explored the effect of reflective feedback based on video recording of pre-service teachers. The study revealed partly comparable results with this study. She concluded that pre-service teachers made use of reflective feedback by means of video performances and enhanced their professional knowledge about classroom management skills such as getting and giving feedback, time management, position, and posture in class, and voice control.

In the literature, there are various research studies of video analysis focusing on several aspects of professional knowledge. Even though they pinpoint diverse aspects of teachers’ professional knowledge, the common outcome is the impact of video analysis on teachers’ reflective ability, which results in teachers’ knowledge growth.

5.6. Implications for Practice

In the present study, a simple self-actualised process of video analysis presented to the teacher educators how this activity can be valuable for fostering the reflectivity of pre-service teachers and their professional knowledge growth during a teaching practice course. Therefore, the study has several implications for teacher educators, university supervisors and particularly for teacher education programmes, whose aim is to prepare pre-service teachers for the real teaching profession by training them to use professional development tools.

Since teacher education programmes have been searching for new ways of fostering teacher learning or teacher professional development, which transform pre-service teachers into lifelong learners, any kind of reflective practice can be profitable. Reflective practice, which is defined as “making informed and logical decisions on educational matters, and then assessing the consequences of those decisions” (Taggart & Wilson, 2005, p. 1), is believed to be one of the most influential professional development tools actualising this transformation process.

However, this transformation process requires the actual involvement of any teacher (novice or expert) as teaching expertise is considered not as a final product to be reached but as an ongoing process. Even though teaching, particularly language teaching, is considered a complex and multidimensional process involving several factors such as students, parents, school management, teaching materials, and learning teaching; improving one’s abilities in teaching is in fact a highly individual process. Following their graduation, pre-service teachers feel alone and vulnerable and they look for scaffolding (Johnson et al., 2014). It is also mentioned in the literature that reflective practice can be a survival tool for pre-service teachers, particularly in their early career years, and it is suggested as a tool for preventing the problem of burnout (Ur, 1996). However, pre-service teachers are just at the first stage of their teaching career and their knowledge of reflecting critically on classroom incidents is not well-developed enough to focus on concerns related with teaching (Chen et al., 2013). Therefore, they need more guidance, practice, and the opportunity to improve their reflective abilities of being critical regarding teaching issues. Consequently, teacher education programmes should create space for training reflective practice and offer courses in which students can advance their reflective abilities to pursue their professional development on their own when they graduate. This study yields

persuasive evidence that self-monitoring in the form of video recording and analysis can be a worthy tool to promote the reflectivity of pre-service teachers on a teaching practice course. Due to the implementation of this activity, pre-service teachers had an opportunity to promote their reflective skills and their teaching knowledge.

A crucial implication of this finding might be the re-consideration and re-structuring of teacher education programmes, particularly the teaching practice course. As it is stated in the literature that former beliefs, attitudes, emotions, knowledge, and values shape pre-service teachers' future, then teaching behaviour and background are two of most influential factors which affect the reflectivity of pre-service teachers (Lee, 2005; Calandra, Sun & Puvirajah, 2014). Therefore, pre-service teachers' knowledge about how to know rather than what to know should be improved by reflective practice activities that are scattered throughout teacher education programme. Among those various reflective practice activities, self-monitoring in the form of video recording and analysis can be considered as one of the easiest and less demanding activities that can assist pre-service teachers in recognising themselves as it holds up a mirror to themselves. The beneficial effect of video analysis on reflectivity level and teaching competencies was proved to a large extent in this study, Thanks to technological advances, video self-monitoring can be carried out even with personal mobile phones, but the important thing is that pre-service teachers should be trained on how to reflect on their own performances critically. The teaching practice course is an excellent opportunity to conduct reflective practice activities, particularly self-monitoring in the form of video recording and analysis. As it is their first official hands-on experience, they may gain knowledge of their insights and this progress can lead to self-development of the pre-service teacher. In other words, video-based self-monitoring can enhance pre-service

teachers understanding of learning and teaching in general and change their focus from themselves to the students.

Even though the importance of reflection, reflective practice, or reflective teaching has widely been accepted in teacher education settings (Lyngsnes, 2012, Gün, 2011, Tan et al., 2010), the actual situation particularly in the teaching practice course context in Turkey is diverse and the promotion of reflective practice is mostly ignored (Eröz-Tuga, 2013; Gönen & Aşık, 2016). Therefore, the procedures and results of the study may assist teacher educators or supervisors in designing necessary educational materials and demonstrate the value of carrying out the teaching practice course to transform pre-service teachers into reflective practitioners. The transformation process can be initiated in other courses before the teaching practice course; its importance for professional development can be highlighted and students can be required to reflect on video performances recorded during their presentations or micro teaching. For the teaching practice course, an exit assignment can be handed to the pre-service teachers in which they are required to reflect on their video performances in real classroom settings. In addition to the opportunities offered to pre-service teachers, teacher educators or supervisors can also be trained about reflective practice, specifically video based self-monitoring. As they will carry out the implementation of reflective practice activities, it is indispensable to train them on the procedures and frameworks that are going to be followed. Furthermore, experienced teacher educators in the field of reflective practice can train other educators and supervisors on employing the self-monitoring in the form of video recording and analysis.

Another implication is that pre-service teachers make use of their recorded videos not only just after the lesson, but they also re-view the recorded materials a

long time afterwards to see their progress in the profession. Thanks to technological advancements, the size of video recordings is reduced; therefore, they are easy to store and carry in any hard drive. Therefore, examples of classroom incidents can also be shown to other pre-service teachers in order to foster their awareness of real classroom atmosphere and help them realise the complexity of classroom management by focusing on certain aspects of it. Furthermore, discussions can be held over the incidents and this shared knowledge about video performances can also foster the reflectivity and professional knowledge of pre-service teachers. Consequently, these sharable sources can provide a platform for collaboration among stakeholders of the teaching practice course and this can lead to an improvement of reflective abilities.

As a conclusion, the use of video recording and analysis as a self-monitoring tool can be recommended to teacher educators to encourage their awareness of this activity and make use of this process to analyse their own teaching before providing structured guidance to pre-service teachers on the teaching practice course in the use of this tool.

5.7. Recommendations for Further Research

By considering the limitations discussed in the first chapter, the study proposed some foundations for further research. The first one is related with the context and sample size of the study. As the study conducted was carried with Turkish pre-service EFL teachers at a state university in Turkey, the findings of the study cannot be generalised to all language-teaching contexts. Furthermore, the sample size of the study, particularly for quantitative analysis, could be increased to have more generalisable results. Therefore, replication of this study with a larger population

sample in different teacher education contexts and programmes could be useful in order to generalise the results of the current study.

The second recommendation concerns the research instruments and reflective practice activities. The qualitative data of the present study is predominantly based on reflective entries derived from video stimulated recall sessions. Further research may include other reflective practice activities such as diaries kept about the process of video-based self-reflection, which will assist the growth of the reflective abilities of pre-service teachers. In addition to self-initiated reflective activities, collaborative activities such as discussion of the recorded performances can be added to a future study. Furthermore, some other activities might be provided to the control group as a placebo treatment in order to make a comparison between the effect of video based self-monitoring and other reflective practices.

The next recommendation is the use of TKT as a quantitative measurement. Despite its effectiveness in assessing the teaching competencies of teachers, it is somewhat limited in its framework and there is a need to investigate the inner understanding of teachers' development in personal values. Therefore, an interview with pre-service teachers about their knowledge growth or observation with a predetermined framework might be valuable to add for further study.

Another recommendation for further research can be about the implementation period of the video-based self-monitoring to observe its long-term effect. The literature suggests that being an expert teacher or being reflective on teachers' experiences take time (Griffin, 2003, Lee, 2005, and Gönen, 2012). Therefore, a further study can be conducted with pre-service teachers in a longitudinal way in which the training and implementation of video-based self-monitoring are initiated in

the third year of their study. Moreover, the training and implementation of self-monitoring can be placed in the curriculum of pre-service teachers. By providing a longer intervention, the effect of video recording and analysis as a self-monitoring activity can be traced independently of other variables affecting the process.

Furthermore, a follow-up study can be carried out with the same participants to observe whether they pursue using the video-based self-monitoring in their ongoing career and how they make use of it.

Last but not least, any further study aiming to assess the impact of video-based self-monitoring usage regarding pre-service teacher reflectivity and knowledge growth may be valuable to conduce to the field of pre-service teachers' professional development.

5.8. Conclusion

Since the introduction of the terms “*reflection, reflective practice, or reflective teaching*” in Dewey and Shön’s time, its importance on adult learning has been investigated in the literature and it has become a mandatory expression in the teacher education world and an ultimate goal for any teacher education programme (Darling-Hammond, 2006; Craig, 2010, Farrell, 2012).

Teacher education programmes designate reflection as a cornerstone for developing the professional development abilities of pre-service teachers and the interaction between reflection and professional development is placed at the centre of any teacher education curriculum. Despite its popularity in the field, there are no agreed-upon guidelines on how this magical process is achieved, particularly in the pre-service education context. The teaching practice period is an excellent opportunity

for teacher education programmes to place pre-service teachers in this valuable process for training. There are several reflective procedures which can be used in this process; however, there is no common framework that can work in all situations. Self-monitoring in the form of video recording and analysis is one reflective practice that can be used in the teaching practice period. Therefore, the influence of video recording and analysis as a self-monitoring tool on pre-service teachers' reflectivity levels and their teaching competencies was investigated in the present study with a convergent parallel design in which the effect of this tool was assessed with a control group.

The overall results of the study conclude that video analysis as a reflective activity is a highly effective tool for fostering the reflective abilities and teaching competencies of pre-service teachers. In other words, video as a self-reflection tool providing a mirror for pre-service EFL teachers where they can recognise their own strengths and weaknesses without fear of being observed by an outside authority. What is more, the use of this reflective process conducted to the transformation of pre-service teachers' knowledge, which shortens their expertise process.

Both quantitative and qualitative analysis concluded that there was a positive relationship between the video-based self-monitoring usage and students' reflectivity and knowledge growth. Teachers who do not have training in developing self-initiated performance assessment abilities may feel somewhat desperate after graduation since they may not find anyone to scaffold them. Therefore, self-monitoring in the form of video recording and analysis can assist them in inquiring about their previous actions and providing alternative solutions to potential problems that they may encounter in their future teaching career. Since it is a self-initiated self-evaluation process, it is a promising activity for pre-service teachers to bridge the theory and practice gap.

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APPENDIX A

CONSENT FORM

The title of the Study: Possible Effects of Employing Video Recording as a Self-Monitoring Tool on Pre-Service EFL Teachers' Reflectivity and Teaching Knowledge

The researcher: Sedat BECEREN

Dear Participant,

With this form, I would like to inform you about the process of the research study that I invite you to participate in. The purpose of the study is to assess the effect of self-monitoring in the form of video recording and analysis over your professional development. The study will be conducted in the 2012-2013 Academic year throughout the school experience and teaching practice courses.

As a part of the study, you are required to carry out some additional duties besides your course requirements. In the school experience course, you will be given training about how to use and implement video based self-monitoring activity. In the teaching practice course, you will employ this activity in which you will record your classroom performances on video and comment on your own or your friends video recording by writing your ideas about the actions you observe in those recordings. Those recordings are saved to my computer for further analysis. In addition, you will fill in some research instruments, and join discussion with a peer and me over your video recording. In this process, you can improve your teaching skills, recognize your weaknesses and strengths about teaching and all these will contribute to your professional development.

Your willingness to participate in the study is necessary for the outcomes of the study, therefore; participation is voluntary. All the documents that you provide to the researcher will remain confidential. Your name and video recording will not be shared any third parties. You can withdraw from your consent at any time. If you have further questions, you can always contact with the researcher in his office.

I have read and comprehend the objectives of the study. By signing the form, I agree to participate in the research study.

Name:

Date:

Surname:

Signature:

APPENDIX B

THE PROFILE OF REFLECTIVE THINKING ATTRIBUTES INSTRUMENT

This study aims to investigate your existing level of reflective thinking. Therefore, reply to the following statements by circling the number of the indicator that best identifies your agreement.

4= Almost always 3= On a regular basis 2= Situational 1= Seldom

When confronted with a problem situation,		Almost always	On a regular basis	Situational	Seldom
1.	I can identify a problem situation	4	3	2	1
2.	I analyse a problem based upon the needs of the student	4	3	2	1
3.	I seek evidence which supports or refutes my decision	4	3	2	1
4.	I view problem situations in an ethical context	4	3	2	1
5.	I use an organized approach to problem solving	4	3	2	1
6.	I am intuitive in making judgments	4	3	2	1
7.	I creatively interpret situations	4	3	2	1
8.	My actions vary with the context of the situation	4	3	2	1
9.	I feel most comfortable with a set routine	4	3	2	1
10.	I have strong commitment to values (e.g., all students can learn)	4	3	2	1
11.	I am responsive to the educational needs of students	4	3	2	1
12.	I review my personal aims and actions	4	3	2	1
13.	I am flexible in my thinking	4	3	2	1
14.	I have a questioning nature	4	3	2	1
15.	I welcome peer review of my actions	4	3	2	1
When preparing, implementing, and assessing a lesson,					
16.	Innovative ideas are often used	4	3	2	1
17.	My focus is on the objective of the lesson	4	3	2	1
18.	There is no one best approach to teaching	4	3	2	1
19.	I have the skills necessary to be a successful teacher	4	3	2	1

20.	I have the content necessary to be a successful teacher	4	3	2	1
21.	I consciously modify my teaching to meet student needs	4	3	2	1
22.	I complete tasks adequately	4	3	2	1
23.	I understand concepts, underlying facts, procedures, & skills	4	3	2	1
24.	I consider the social implications of so- called best practice	4	3	2	1
25.	I set long-term goals	4	3	2	1
26.	I self-monitor my teaching	4	3	2	1
27.	I evaluate my teaching effectiveness	4	3	2	1
28.	My students meet my instructional objective when evaluated	4	3	2	1
29.	I use a journal regularly	4	3	2	1
30.	I engage in action research	4	3	2	1

APPENDIX C

Rubric for Levels of Reflective Thinking

Taggart and Wilson (1998-2005)

The first level the technical level

- Make simple descriptions of observations
- Focus on behaviours, content, and skills from experiences or theory derived from readings or course works, without looking for alternatives
- Are task oriented, viewing teaching competency as meeting a set of objectives.
- Use appropriate educational vocabulary to correspond with current skill and pedagogy level

The second level of reflectivity the contextual level

- Reflect on practices as those practices affect students' learning
- Reflect on decisions relative to the context of the situation
- Reflect on content related to student needs
- Relate theory to practice
- Focus on action
- Look for alternatives to practice based on knowledge and personal values
- Analyse, clarify, and validate practices/principles based on sound teaching constructs
- Assess implications and consequences of actions and beliefs
- Clarification of assumptions and predispositions of practice and consequences

The highest level of reflectivity, critical reflection, the dialectical level

- Systematically question practices
- Suggest alternatives and competing theories

- Reflect on decisions and consequences during the action
- Contemplate moral, ethical, and socio-political issues relative to instructional planning and implementation
- Express themselves verbally and in their writing with efficacy and self-confidence
- Reconstruct action situations as a means for reviewing self-as-teacher
- Examination of contradictions and systematic attempts to resolve issues
- Achieve disciplined inquiry, individual autonomy, self-understanding, and self-actualization



APPENDIX D

Sample of Teaching Knowledge Test Module 2

2

For questions 1-6, match the textbook rubrics with the lesson aims listed **A**, **B** or **C**.

Mark the correct letter (**A**, **B** or **C**) on your answer sheet.

Lesson aims

- | | |
|----------|---------------------------------|
| A | developing pronunciation skills |
| B | developing reading skills |
| C | developing vocabulary |

Textbook rubrics

- 1** Choose the best summary of each paragraph.
 - 2** Listen and group the words according to whether they have two, three or four syllables. Practise saying them in pairs.
 - 3** Complete this chart with the correct prefixes or suffixes.
 - 4** Indicate on the map the way that Kate went, according to the information given.
 - 5** Read and listen to the dialogue and underline the weak forms.
 - 6** Circle the noun in each set which does not collocate with *have*.
-

APPENDIX E

Sample of Teaching Knowledge Test Module 3

o

For questions 24-30, match the teacher's instructions with the activities that the class is doing listed A-H.

Mark the correct letter (A-H) on your answer sheet.

There is one extra option which you do not need to use.

Teacher's instructions

- 24 Right, now everybody, please pass your paper to the person on your left. Then read and reply to the message.
- 25 The man gives lots of reasons why he is late. Write down three of them.
- 26 OK, now you Paola. Tell us about your family – your parents and brothers and sisters.
- 27 Don't forget to take your coursebook with you – the Useful Language section on reports is very good.
- 28 OK, now, all the Student Bs, listen very carefully, as you have to give detailed feedback on your partner's story.
- 29 OK everybody, repeat after the tape.
- 30 Jacques, turn away from Brigitte so you can't see her text.

Activities

- A The teacher is doing a fluency activity with an advanced class.
- B The teacher is giving a written homework task to an advanced class.
- C The teacher is doing a jigsaw-reading task with an intermediate class.
- D The teacher is doing a classroom writing activity with an intermediate class.
- E The teacher is doing a word-building activity with an intermediate class.
- F The teacher is doing a listening comprehension task with an intermediate class.
- G The teacher is doing a fluency activity with a low-level class.
- H The teacher is doing a pronunciation activity with a low-level class.

APPENDIX F

Sample Reflective Entry

Student XXX

Based on Fourth Video Performance

Questions related with planning and preparing a lesson and selecting and utilising resources and materials

1- Did viewing your former performances on video influence your planning stage of your subsequent performance? If so how? (For example, did you change your instructions, the materials that you use, or activities)

- As I always say, viewing my previous performance give me ideas about how to make my job easier. So, I can easily say that these previous experiences influence my planning stage. As I observed that visual materials and videos are very useful to draw students' attention at the early stage of lessons, I again preferred to make use of videos for my revision part. It is good to say that I have a way of speaking that is understood and confirmed by students, and this makes my job easier when I prepare my instruction and stages. Actually, this performance relied on course book as we were forced to do so, nevertheless, as for first 20 minutes, I got what I want by means of getting students involved in the lesson. And previous performance that I viewed and analysed before gave me the idea about how to do that more comfortably.

Questions related with teachers' and learners' language in the classroom

1- Did you notice any serious errors in your speech? If so, give reference from your video (It can be a pronunciation error or a grammatical error)

- I am happy to say that I succeeded to minimize my mistakes by means of both grammar and pronunciation thanks to experience. But surely, there were few mistakes. For instance; at 5:25, I had a problem of choosing the right vocabulary item at the time of speaking. I was talking about mouse and I was trying to ask if there was a probability to escape and I said a probability to save. Fortunately, I realised it at that time and correct it by saying escape suddenly. That worked out and students did not realise as they focused on their predictions and my transmission to correct vocabulary was natural. There were no other mistakes, fortunately.

2- *How did you correct wrong answers? (give reference from your video)*

- Actually, I did my best for correction so far because I preferred to have them correct themselves by giving them some clues and by echoing. And it was good to see that that worked well. For example, in second part of my video, at 2:41, when I asked about their prediction, a student tried to answer with a wrong grammar and said, ‘my prediction is more than scary than the video’. I did not panic, and I waited for a while and repeat what she said. This helped me to have her realise her mistake on her own. So, she thought about it more and said, ‘scariest than.’ She corrected her first mistake but there were still problems to be corrected because she failed to express herself. She just did not piece them together. That was where I helped her directly and I said, ‘your prediction is scariest than that’ and she confirmed by saying yes. She was still trying to express herself, but I provided some clues on the board to make her job easier. She talked about her prediction, but it was really confusing by means of both meaning and grammar. So, I wanted her to make it like ‘you just use will and be going to.’ And finally, I got what I wanted because she was able to talk about her prediction by using will.

Questions related with classroom management

1- *What was your role as a teacher?*

- I actually tried to have different kind of teachers’ roles while I was preparing myself for this performance. It is good to say that I was able to put these plans into action in classroom. I can say that I was a good manager by means of both maintaining silence and friendly atmosphere in classroom all along the course. The most obvious role was actually being prompter as this lesson was based on prediction. I tried to have them think about the next steps, next events to come which required being willing to have students really try to guess and participate these activities. Another role as a teacher, I was a useful source for them by providing them an interesting revision opportunity via videos and when there were new vocabulary items, I was good at describing that by making use of some examples and having them think.

2- *In your opinion, what are your strong and weak points as an English teacher depending on this video performance?*

One of my strong points is being willing to do that job which can be seen on the video. I really motivate myself and enjoy what I am doing there. Because as I state generally, teaching something to somebody and seeing that they are truly learned give me a unique

feeling that also give me the chance to improve myself on and on. The other strength for me is that I use a simple and plain language in classroom which helps me to maintain positive atmosphere in classroom. Making use of visuals such as videos and pictures is also one of my strong points as I clearly see that they work well. I am also good at maintaining discipline and silence when I come across with a problem by directly warning them in required manner. These are my dominant strengths for this performance. As for my weaknesses, I still some problems with my body language and there are sometimes that I put my hand on my face or on my tie while

