

Using a video tagging application to support professional development and reflection: a case study of pre-service and in-service teachers

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Abstract

Reflection is widely accepted as a vital element of professional development in numerous fields, including teacher education. Advancements in technology have allowed teachers' reflections to move from memory-based practices to evidence-based practices incorporating the use of audio and video recordings. Despite the value placed on reflection and the current prevalence of video-based observation practices, the use of video for reflection and professional development and its impact on teaching practices remains insufficiently researched.

This case study investigates the use of a recently developed video tagging application (VEO) for the development of teachers' reflective and teaching practices in pre-service and inservice contexts. Data sources include video observation recordings, video tagging information, video-based feedback meetings, reflective essays, and interviews. Qualitative content and thematic analysis are used to uncover how teachers reflect, what they focus on and the affordances and drawbacks of using the video tagging application for reflection.

The findings show that VEO is able to act as a catalyst for dialogic reflection and understanding of pedagogy through a) the use of a subject-specific tag set, b) the supervisor observing and tagging lessons using VEO, c) VEO being incorporated into the post-observation meeting with tags shaping the dialogue and d) tags providing further guidance and scaffolding for individual reflection. Additionally, the findings highlight the analytical affordances of VEO as the pre-service teachers were able to focus on a range of subjects in their reflections, reflect in a dialogic manner using the tags and show improvement in their practice. For the in-service teachers, VEO was found to facilitate reflective dialogue by shifting the dynamics of the post-lesson meeting through the affordances of video and the structuring of the tags.

This study offers a theoretical contribution to reflection literature with the creation of a reflective framework to analyse video-based written reflections. Expanding the descriptive levels of reflection, analysis with the framework shows that reflection is impactful even when the writing does not show linear improvement and is mainly descriptive. Uncovering this link between reflection and the development of teaching practice has implications for reflective practice, suggesting that analysis of written reflection solely does not offer a full

picture of the impact of reflection, and greater emphasis needs to be given to classroom
data.

Declaration

Publications associated with this thesis:

Tasdemir, S. and Seedhouse, P. (2022) 'Improving discipline and classroom management using VEO in a Turkish University Pre-service Context', in Seedhouse, P. (ed.) *Video Enhanced Observation for Language Teaching: Reflection and Professional Development*. Bloomsbury Academic

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Chapter 1 Introduction

Regardless of the field, the need for individuals to better understand and improve their practice has been crucial to professional development. The act of thinking about one's practice and looking for areas to develop has been termed as reflection since the seminal piece of John Dewey (Loughran, 1996). The idea of learning and developing by looking into one's own practice and thus becoming reflective practitioners has found its place in teacher education, amongst many other professions. Following Schön's (1983, cited in Loughran, 2002) reminder to link theory and practice, reflective practice and the objective to create reflective practitioners have become central to teacher education programs (Loughran, 2002). Following in the footsteps of general education, reflective practice has been popular in the field of English language teaching since the early 1990s (Farrell, 2018).

Reflective practice is seen as a way to bridge theory and practice, and in the field of second language teacher education, there is evidence that engaging with reflective practice has positive impacts (Farrell, 2019b). Equipping teacher candidates with the ability to analyse and evaluate their own teaching is vital (Lofthouse and Birmingham, 2010) because, due to the complex nature of teaching and the impact of contextual factors, it is impossible for teacher education programmes to prepare candidates for everything (Loughran, 1996).

Amongst other methods, with the improvement of technology, using video recordings for reflection has become prevalent due to its capacity to 'make the tacit explicit' (Loughran, 2002). Video recording provides the opportunity to replay, change focus and go over details that might not have been noticed in the complexity of the classroom environment (Richards and Lockhart, 1996), and teachers can reflect on their practice by looking at their own actions or by focusing on the learners' interaction (Sherin and Van Es, 2005).

Extensive research has been conducted investigating reflective practice using a variety of methods, including but not limited to reflective writing, classroom observation, peer observation, peer discussion, mentor discussion and video-based observation. Many studies implement a combination of these approaches having classroom observations followed by discussion and individual reflective writing. Despite the ubiquity of reflective practice research, the field has been criticised for not making the value of reflection explicit (Griffiths, 2000), using vague terms to describe reflection (Farrell, 2016) and overall heavily

focusing on its perceived affordances without linking it to practical aspects of teaching (Akbari, 2007) or making clear how it actually gets done (Mann and Walsh, 2013). Mann and Walsh (2013) summarise the current status of reflective practice in applied linguistics and TESOL stating that it 'has achieved a status of orthodoxy without a corresponding data-led description of its value, processes and outcomes' (p. 291).

The aim of this research is to investigate the use of a mobile video observation app (VEO) for reflection and professional development in pre-service and in-service contexts. Emphasis is placed on detailing how reflection is carried out, which aspects of the process impact teacher reflection and drawing links between reflective practice and improvement in teaching skills.

1.1 Background and Rationale

1.1.1 Video-based Reflection

The use of video in teacher education is not a new concept, with research going back to the early 1970s (Baecher *et al.*, 2018). However, with advancements in technology making recording, viewing and sharing videos much easier, its use for teacher training and professional development has increased in both pre-service and in-service contexts in all subject areas (Gaudin and Chaliès, 2015). Video has been used for reflection in a number of different ways (Tripp and Rich, 2012). Such as recording micro-teaching sessions (Eröz-Tuğa, 2013), video editing (Fadde, Aud and Gilbert, 2009; Trent and Gurvitch, 2015), having group discussions on video segments (Harford and MacRuairc, 2008), peer videoing (Harford, MacRuairc and McCartan, 2010) and video annotation (McFadden *et al.*, 2014).

Findings of research into video use for reflection show that upon watching videos of their teaching, teachers become more self-critical and aware of their strengths and weaknesses; they also realize aspects of their teaching they were previously unaware of (Fadde, Aud and Gilbert, 2009; Lofthouse and Birmingham, 2010; Tripp and Rich, 2012a; Eröz-Tuğa, 2013; Mercado and Baecher, 2014). Video's collaborative use showed that peer videoing enables the formation of a critical dialogue amongst peers and develops their reflective skills (Harford and MacRuairc, 2008; Harford, MacRuairc and McCartan, 2010). Another advantage of video is its role as evidence; teachers emphasize that the use of video recordings allows for a fair evaluation of the lesson (Tripp and Rich, 2012; Kane *et al.*, 2015)

and that they can go back and check the video in case of any disagreement between the trainer and trainee (Lofthouse and Birmingham, 2010).

While studies have extensively reported on the affordances of video-based reflection, much like general reflection literature, research does not provide a clear picture of whether and how video-based reflection impacts teaching practices (Gaudin and Chaliès, 2015; Baecher et al., 2018). Another gap in the research is related to study context with the majority of video reflection studies being conducted in the field of mathematics and science education with predominantly English speaking participants (Payant, 2014; Hüttner, 2019). While findings relating to video use might be transferable to other teaching subjects, an investigation of video-based reflective practice in TESOL contexts requires special attention because the nature of language teaching means video provides the affordance of focusing on teacher's own language use amongst other possible subject specific affordances (Hüttner, 2019). Indeed, Walsh and Mann (2015) have also criticized the state of reflective practice research in TESOL stating that the methods employed have been predominantly written and there is need for a shift towards more data-led implementations of reflective practice incorporating video recordings.

1.1.2 Development of the VEO app

Video annotation tools and methods in teacher education support teacher self-analysis of personal practices and thus provide a powerful means of improving reflective practices (Rich and Hannafin, 2009). Although they increase the accessibility of video reflection and have been widely used by researchers, Rich and Hannafin (2009) suggest that their application in supporting teacher reflection remains insufficiently researched.

One technological development that can be considered in the field of video annotation tools is the Video Enhanced Observation (VEO, 2016) application developed at Newcastle University. The design intention behind the VEO app was to create a user friendly, flexible system that facilitates the sharing of good practice (Miller and Haines, 2022a). One of the unique aspects of the VEO app is its flexible tagging system that enables the user to time stamp significant moments while recording a lesson or practice (ibid.). Once the recording and tagging is done, the tags generate statistics to get a general understanding of the lesson, or they can be used to view specific parts of the recording. The tag sets are fully customisable which makes the app highly flexible and adaptable to different contexts. The

recorded videos can be uploaded to and stored on a web-based portal named VEO portal. The portal allows users to create personal profiles, professional communities, and networks. Users can review their videos, search for specific tags, and invite other users to watch and comment on their videos. The technology also provides the opportunity for users to upload different format videos directly to the portal without using the app on a mobile device (iPad) and tag retrospectively. It seems that issues raised about using video for reflection such as the challenge of learning to edit videos, finding appropriate equipment, software, and suitable storage facilities (Calandra *et al.*, 2006; Fadde, Aud and Gilbert, 2009; Rich and Hannafin, 2009; Lofthouse and Birmingham, 2010) can be resolved using VEO. More detailed information on the app's use can be found in the app creators Miller and Haines' practical guide (2022b).

1.1.3 VEO Europa Project

The Erasmus+ funded VEO Europa project was the first large scale project to investigate the use of the VEO app for improvement of teaching and learning (*VEO Europa Project*, 2016). Six partners across five countries (UK, Germany, Finland, Turkey, and Bulgaria) investigated how VEO could be used to facilitate reflection and promote teacher learning in a range of different contexts. The project which ran from September 2015 to September 2017, culminated in the book titled *Video Enhanced Observation for Language Teaching* (Seedhouse, 2022) which presents the various uses of VEO and the study findings. The data collected within the VEO Europa project also formed the database for this thesis research.

1.2 Research Context

1.2.1 English language teaching in Turkey

English is the main foreign language in Turkey. It has a huge role, with it being taught from the second grade (age 7) in state schools and as early as kindergarten in some private schools (Özen *et al.*, 2013). Since English is a part of the curriculum from primary school to high school (12 years), there is a large number of English language teaching departments in Turkish universities (78) (Yüksek Öğretim Program Atlası, 2020). Despite Turkish students being taught English for an estimated 1000+ hours (Özen *et al.*, 2013), the language proficiency levels show that there is need of improvement in teaching, with the EF English Proficiency Index (2019) ranking Turkey 79 out of 100 countries/regions, with a very low

proficiency score (Education First, 2019). These numbers underline the need to focus on English language teacher education in Turkey (Tasdemir and Seedhouse, 2022).

1.2.2 Issues in language teacher education in Turkey

Investigating the state of English language teacher education (ELTE) in Turkey, Öztürk and Aydın (2019) report that while the global ELTE scene appears to be moving away from theory focused curricula towards a more reflective and collaborative learning space, Turkey has not kept up with these reforms. The main criticism towards pre-service ELT education in Turkey is that it is theory-oriented and does not provide pre-service teachers with sufficient real classroom experiences (Mahalingappa and Polat, 2013; Öztürk and Aydın, 2019). Numerous studies examining the ELTE programmes in Turkey report the main shortcomings as a lack of focus on classroom management skills (Coskun and Daloglu, 2010; Öztürk and Aydın, 2019), limited teaching experience in practicum (Karakaş, 2015; Mutlu, 2015) and insufficient supervisory support due to large cohort numbers (Celen and Akcan, 2017).

1.2.3 Promotion of reflection as a solution

While these issues with language teacher education ideally require fundamental curriculum changes to take place, one way of bridging the glaring theory-practice divide is the promotion of reflective practices (Korucu Kis and Kartal, 2019; Tezgiden-Cakcak, 2019). Looking at the current state of reflective practice in teacher education in Turkey, Eğmir (2019) found that while studies gained traction from 2008 and onwards, the research was mostly done on blog use for reflection followed by journal writing which only confirms the need for research into video-based reflection practices in the Turkish ELT context.

1.2.4 Reflective practice in in-service contexts

In addition to the two case studies focusing on pre-service English language teachers in the Turkish context, this study also draws from the wider in-service data collected within the VEO Europa project. Within the goal of training teacher candidates to become reflective practitioners lies the hope that they will apply these skills to their in-service teaching and continue reflection (Loughran, 1996). However, accomplishing this might be trickier than expected as in-service teachers are expected to balance busy schedules, organizational demands, and new contextual factors with the regular complexities of teaching. Research shows majority of reflection studies have been conducted with pre-service teachers (Hamel and Viau-Guay, 2019; Hüttner, 2019). Additionally, studies conducted in the in-service

context show a similar trend as the pre-service literature, being mostly situated in mathematics and science teacher education in the USA (Major and Watson, 2018). If reflective practice is expected to go beyond the confines of the teaching practicum where reflective activities are introduced by the university supervisor/researcher (Baecher *et al.*, 2018), there is a need to further examine how exactly in-service teachers prefer to incorporate video-based reflection into their practice.

1.3 Research Contribution

This study aims to contribute to reflective practice in language teacher education literature in two ways: first by providing a detailed description of how reflection is carried out with the use of a video analysis tool and second by drawing links between reflection levels and the impact of reflection on teaching practice by bringing together written reflection analysis and real classroom data extracts. Based on the findings, VEO is able to act as a catalyst for dialogic reflection and understanding of pedagogy and professional practice. Within the preservice teaching context this is accomplished through a) the use of a subject specific tag set (language teaching), b) the supervisor observing and tagging lessons using VEO, c) VEO being incorporated into the post-observation meeting with tags shaping the dialogue and d) tags providing further guidance and scaffolding for individual reflection. Based on this structure, a model for a VEO-integrated practicum in pre-service teacher education is developed (see Figure 8.1). This model can elevate the effectiveness of practicum programmes in Turkey and other contexts alike. In the in-service context, VEO facilitates reflective dialogue by shifting the dynamics of the post-lesson meeting through the affordances of video and structuring of the tags.

A second contribution strand is the analysis of a relatively new mobile video observation tool, examining its use in both pre-service (Turkey) and in-service (UK) contexts and reporting on the perceived advantages and disadvantages. This investigation will contribute to our understanding of the role of video-based tools for teacher development and reflection, providing helpful guidance for future applications.

A final theoretical contribution of the study is the critical analysis of the literature on analysing reflective writing and the data led creation of a reflective framework for analysis. The framework's use draws attention to the value of descriptive forms of writing and

displays that improvement of teaching practice and shifts in perspective can be observed even when the pre-service teacher is mostly writing descriptively. This has implications for future reflection studies, suggesting that solely examining reflective writing provides an incomplete picture of reflection and there needs to be an increased focus on audio/video/interactional data (Walsh and Mann, 2015).

1.4 Research Questions

The aim of this case study is to investigate how pre-service English language teachers in the Turkish context and in-service teachers from a range of teaching subjects use a mobile video observation tool (VEO) for reflection and professional development. Guiding this research, the main research question is:

'Does VEO act as a catalyst for dialogic reflection and deep understanding of pedagogy and professional practice? If so, how?'

The sub questions are:

1. How do teachers use VEO for their reflective practices?

This question will be answered by providing a detailed description of the types of procedures and processes pre- and in-service teachers implement while using VEO for reflective practices and professional development. In doing so it aims to further our understanding of how exactly video-based technology is integrated into teaching practices with the goal of facilitating reflective practice. Data will be based on interviews, evidence of VEO use in reflective essays and VEO app data.

2. To what extent does VEO support teachers' reflective practices and professional development?

This question will be answered through the examination of the two pre-service case studies. Within the case studies an analysis of reflective essays is conducted to examine both the level of reflection and the content, providing a detailed understanding of what the teacher candidates focus on when engaged in video-based written reflection. This is then combined with classroom extracts to uncover any development in practice. Data will be based on written reflective essays,

supervisor-pre-service teacher post-observation feedback meetings and VEO recorded lessons.

3. What are the advantages and disadvantages of using VEO?

The final sub question focuses on the benefits and drawbacks of using VEO with data being drawn predominantly from interviews. This aims to both provide a better understanding of the possible affordances of video-based reflection and provide input for the future implementations of such tools.

1.5 Thesis Structure

Chapter 1 Introduction

Provides background and rationale for the study through locating it in the relevant research context.

Chapter 2 Literature Review

In this chapter reflection literature is reviewed starting with a theoretical overview of reflective practice, different approaches to and definitions of it. This is then followed by a review of practical implementations of reflection, especially focusing on written and videobased reflection. The literature chapter starts off by examining studies positioned in the wider educational context and continues by narrowing down to studies in the language teaching context and Turkish context.

Chapter 3 Methodology

The methodology chapter states the research questions and outlines the research design. Philosophical assumptions underpinning the study and the role of the researcher is discussed. Participants and the research context are introduced, followed by a presentation of data collection and analysis methods. The chapter is concluded with a focus on trustworthiness and ethical considerations.

Chapter 4 VEO User Experience

First of the analysis chapters, in Chapter 4 the third research question 'what are the advantages and disadvantages of using VEO?' is answered through the thematic analysis of interviews and sections of reflection essay data from both contexts (pre-service/Turkey and

in-service/UK) and is supported by extracts from post-observation feedback meetings where relevant.

Chapter 5 The Process of VEO Use and Reflection

The second section of the analysis focuses on how VEO is used in pre- and in-service contexts and a brief comparison of the two. The analysis goes deeper with the two preservice teachers from the Turkey context and examines to what extent VEO facilitates professional development, through providing a detailed analysis of their practicum with VEO.

Chapter 6 Reflective Writing Using VEO

The third section of the analysis focuses on the reflective essays of the two pre-service teachers from the Turkey context and sets out to examine how VEO is used in further written reflection. The detailed analysis includes examining quality and focus of reflection.

Chapter 7 Discussion

In the discussion chapter the study findings are interpreted by referring to the existing reflection literature. This chapter is organized by the sub-research questions, displaying how each question is answered through the analysis.

Chapter 8 Conclusions

The final chapter presents an overview of the study and research questions. This is followed by outlining the implications and limitations; and concluded with recommendations for future research.

Chapter 2 Literature Review

As this study investigates the use of video observation for professional development and reflection, the literature review chapter will start off by examining the concept of reflection, bringing together the different approaches to and definitions of it. This will be followed by reviewing the practical implementations of reflection, particularly focusing on writing and video observation for reflection. A section focused on analysing reflection is added to provide a background for the methodology chapter. The video observation section will include studies in pre-service and in-service contexts as well as situating video-based observation in the field of English language teaching and the Turkish context. Through this review the literature chapter sets out to emphasize the complexity of reflection as a concept and outline criticisms of and gaps in reflection research. These are the heavy focus on written forms of reflection, the lack of studies investigating the relationship between reflection and teaching practices, the need for further and detailed examination of the implementation of video-based reflection and the relative paucity of video-based reflection studies conducted in the field of language teaching and in the Turkish context.

2.1 Reflective Practice: A Theoretical Overview

This section of the literature review will provide a brief history of reflection with a focus on the work of Dewey and Schön as the scholars that have been influential in the field of education. This will be followed by an overview of some of the definitions, categorizations, levels, and typologies of reflection in order to provide a better understanding of the variety of approaches to reflective practice.

2.1.1 Brief history of reflection

The need for developing one's understanding of their actions in practice and transforming this understanding into becoming a skilled practitioner has been common across many professions including medicine, law, science, and education (Loughran, 2002). Indeed, reflection has become a common term in professional development and teacher education worldwide (Farrell, 2015). While reflective practice really found its place in teacher education in the late 1980s (Mann and Walsh, 2013) due to the influence of Schön's work (Loughran, 2002), the origins of the concept can be found in ancient times.

The term 'reflection' is derived from its Latin origin 'reflectere' which means 'to bend back' (Valli, 1997, p. 67). Looking into the history of reflection, Farrell (2015, p. 7) traces it as far back to the famous quote of Greek philosopher Socrates: 'the unexamined life is not worth living'. It has been recognized for centuries that humans tend to examine their daily lives in one form or another engaging in what Farrell (2015) calls 'common sense reflection'. Setting out to historicize reflection and provide an overview of the different and sometimes contradictory threads that have influenced the concept today, Fendler (2003) brings the discussion to modern philosophy and traces reflection back to the epistemological foundations of Cartesian rationality. In its Cartesian meaning, reflection is based 'on the assumption that self-awareness can generate valid knowledge' (Fendler, 2003, p. 17). In line with this view, the Cartesian framework perceives all forms of reflection valuable as it is considered an indication of self-awareness (Fendler, 2003).

Coming to the early twentieth century, the educational theorist Dewey is recognized as the originator of the concept of reflection in education (Hatton and Smith, 1995). In his frequently referenced book titled *How We Think*, Dewey outlines various forms of thinking and draws emphasis on the difference between reflective thinking and 'stream of consciousness' thinking (1933, p. 3) stating that the former has a purpose and aims at a conclusion. For Dewey reflective thinking starts from a 'state of doubt' (ibid, p. 11), a confusion or uncertainty and progresses through the act of examining, researching, and inquiring to solve the initial doubt and reach clarity. Dewey puts this reflective process into five phases as suggestions, problem, hypothesis, reasoning, and testing (Loughran, 1996). Viewing this process as a transformation of routine and impulsive action into 'intelligent action' (ibid, p. 17), Dewey defines reflective thinking as:

'Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends.' (ibid, p. 9).

Dewey argues that the development of reflective thought should become an educational aim and views the end goal of reflection as change and professional growth (Farrell, 2012), although this change does not necessarily have to be in observable action it can also be as learning in the form of newly gained perspective or a mental shift.

Despite Dewey's reflective model being focused on problem solving and appearing to be 'ends-based' (Farrell, 2018), he also adds an affective element arguing that simply having the information on how to think reflectively does not automatically translate into action and one needs to possess certain attitudes to be able to do so. He lists these attitudes as open-mindedness, responsibility, whole-heartedness, and directness (Dewey, 1933; Farrell, 2012). Loughran (1996) opens up what possessing these attitudes would entail as:

'Being attuned to "seeing" is being open-minded, seeing the problem situation in different ways is being responsible, and wanting to respond, whilst accepting the consequences of action, is to display the attitude of whole-heartedness.' (p. 16)

The next influential work on reflective practice came nearly fifty years after Dewey's *How We Think* from Schön with *The Reflective Practitioner*. Loughran (1996) describes the influence of Schön's work as leading to 'a new wave of research and learning about reflection' (p. 6). Coming from a background in architecture, Schön criticizes technical rationality, its privileged position, and the separation of research from practice. He advocated for a more intuitive form of reflection and outlined two forms of it as reflection-in-action and reflection-on-action. Reflection-on-action means reflecting on one's practice after the fact and reflection-in-action is the concept of thinking about action while engaged in it (Schön, 1983). From the two, reflection-on-action is what most of the literature on reflective teacher education is concerned with and reflection-in-action is concerned with the reframing of experiences in the face of unexpected happenings (Loughran, 1996).

Schön argues that the perspective of technical rationality views professional practice as problem solving (1983). He emphasizes the lack of attention given to the setting in which the problem occurs. Describing practice, especially teaching, as multifaceted and full of uncertainty (Valli, 1997), Schön argues for a form of reflection that takes into account the unique complexities of the practitioner's individual context that he describes as 'a swampy lowland where situations are confusing "messes" incapable of technical solution.' (Schön, 1983, p. 42). This view of reflection places the practitioner/teacher as the decision maker and problem solver within their own context (Schön, 1987). Moving away from the systematic, top-down form of reflection, Schön focuses on 'knowing in action' (Farrell, 2018) and intuitive practice (Griffiths, 2000).

While Schön's concept of reflection-in-action received considerable interest in the field of teacher education (Calderhead, 1989), this did not come without criticisms. Eraut (1995) called for a need for reframing Schön's concept, pointing out that the settings within which he discussed reflection-in-action were mostly architecture studios and one on one tutorials (Griffiths, 2000), thus settings much quieter and calmer than the usual classroom. Similarly, van Manen (1995) emphasized the difficulty of applying the concept of reflection-in-action to teaching due to the highly complex, dynamic, and demanding nature of classrooms. He argued that the classroom setting would not allow for the teacher to step back, weigh alternative options, and make a decision, thus suggested that perhaps the teacher is unreflective during the class in order to be able to keep the lesson flow going (ibid, 1995).

Despite Schön's ideas of reflection being uncritically used in teacher education (Griffiths, 2000), his concepts of intuitive practice and knowing-in-action are crucial (Farrell, 2012) because as van Manen (1995) emphasizes, it is not possible nor practical for teachers to question their every action during teaching. This concept of balance between reflection and intuitive action is also present in Dewey's work, as he states 'without some routine, without some secure assumptions, we would be unable to act or react' (Zeichner and Liston, 2014, p. 13).

Although Schön's work was heavily influenced by Dewey's work, their conceptions of reflection differ in certain ways. Dewey's view of reflection is seen as more positivistic (Fendler, 2003) and closer to scientific method with an emphasis on 'sequential logic' (Valli, 1997, p. 71). He also places greater focus on intentional and retrospective reflection (Kinsella, 2009). Whereas Schön brings to this an emphasis on uncertainty and intuition (Valli, 1997). His conception is seen as more artistic and practice based (Fendler, 2003) with a focus on the temporally different forms of reflection (Kinsella, 2009). Despite these often not clearly mentioned differences (Moon, 1999), there are also commonalities. For both Dewey and Schön reflection starts from a point of uncertainty and confusion within an experience (Farrell, 2018). They both view reflection as an evidence-based process that requires some form of data collection in order to deal with the triggering uncertainty and make informed decisions (Farrell, 2012).

2.1.2 Understanding reflection

Researchers have taken varied approaches towards understanding reflection and have focused on different aspects of the concept. While some have focused on reflection as a process, others have defined it in levels and typographies.

Reflection as a process

Boud et al. (1985) broadly define reflection as 'a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations' (p. 19). They stray from Dewey's conception of reflection by giving 'much greater emphasis to the affective aspects of learning, the opportunities these provide for enhancing reflection and the barriers which these pose to it' (p. 21). Boud et al. (1985) caution teacher educators against falling into the trap of assuming effective reflection is taking place due to the familiarity and widespread acceptance of reflective activity. They outline three points to keep in mind while attempting to promote and facilitate reflection. First of all, educators only have access to what learners choose to share and reveal about their internal thoughts and processes; in this regard the learner has full control over internal reflection. Secondly, reflection requires intent and is 'directed towards a goal' (ibid, p. 11). Finally, affective, and cognitive elements are interrelated and together form the reflective process.

Their model of reflective process consists of three main phases: experiences, reflective processes, and outcomes. The experiences that start off the reflective processes can be behaviour, ideas, or feelings. Unlike Dewey, Boud et al. (1985) argue that the impetus for reflection does not necessarily have to be 'a state of doubt, hesitation, perplexity, mental difficulty' (p. 12); rather a positive state or success can also stimulate reflection. The reflective processes phase takes place by 'returning to the experience, attending to feelings, and re-evaluating the experience' (p. 21). The goal of reflection is to prepare learners for new experiences and the outlined process can lead to the outcomes of gaining new understandings, finding a new way to implement something, clarifying an issue, and solving a problem.

Another model of reflection is Kolb's (2015, originally published in 1984) model situated in experiential learning (Farrell, 2015). Although Kolb's main focus was not reflective processes

(Moon, 1999) 'the model is based on the notion that the best learning is achieved through involvement of reflection and action' (Moon, 2004, p. 13). Defining reflection as 'the internal transformation of experience', Kolb's Experiential Learning Cycle is formed on opposing modes of comprehending and transforming experience (Kolb, 2015, p. 58). The two modes of taking in information are identified as Concrete Experience and Abstract Conceptualization; interpreting and making sense of this information can be done through Reflective Observation and Active Experimentation. These four elements are placed in a circle with links in between and one would start the cycle through Concrete Experience. This experience provides a basis for Reflective Observation, which is followed up with the creation of new theories and understanding at Abstract Conceptualization and finalizing one round of the cycle at Active Experimentation (Moon, 2004). Kolb's model has since been built upon extensively, with one widely used adaptation being Korthagen's (1985) ALACT model (Farrell, 2015).

Korthagen's (1985) conceptualization of reflection is displayed as a spiral model detailing the steps of reflection. The ALACT model is created within a pre-service teacher education programme with the specific aim to promote reflection. The programme structure is based on the assumption that preparing student teachers for every teaching situation is impossible, however pre-service teachers can be taught to reflect so they have the necessary tools to further their own professional growth. The spiral model starts with an action phase and the first letter of each phase forms the model acronym:

Action

Looking back on the action

Awareness of essential aspects

Creating alternative methods of action

Trial

Stating reflection requires experience to take place, Korthagen (1985) underlines that the experience forming the action phase of the spiral does not need to be limited to the classroom. The research findings showed that more than half of the students learned the effects of reflective teaching within this programme designed to promote reflection. One interpretation Korthagen offers for this finding is that the effectiveness of reflective programmes may be dependent on students' predisposition for reflection. Thus, he advises

that difference between students should be taken into account as those who are not predisposed to reflect need much more external support. In a later study conducted by Korthagen and Wubbels (1995), the difference in predisposition for reflection is made clearer as the researchers identify two types of practitioners as internally oriented and externally oriented. Internally oriented practitioners are those willing to use their own knowledge and understanding to solve their problems and restructure their experiences whereas externally oriented practitioners rely more heavily on guidance and structure provided from the outside. Defining reflection as 'the mental process of structuring or restructuring an experience, a problem or existing knowledge or insights' (Wubbels and Korthagen, 1990, p. 55), the researchers state that internally oriented practitioners are more likely to be reflective.

In the same vein, LaBoskey (1993) designs a conceptual framework for reflection in preservice teacher education accounting for the notion that students are not blank slates when they enter their programs. LaBoskey places students on a continuum of commonsense/pedagogical thinking as:

Common-sense Thinkers

Alert Novices

Pedagogical Thinkers

The purpose of reflection is to move towards becoming pedagogical thinkers and learning to improve one's 'understanding of, feelings about, and responses to the world of teaching' (ibid, p. 30). LaBoskey defines Common-sense Thinkers as being occupied with 'how to?' and 'what works?' questions, whereas Alert Novices are more likely to ask 'why' questions and are much more receptive to reflective practice (ibid, p. 30).

In the resulting framework pre-service teachers enter a programme with their preconceived notions, the process of reflection is initiated by an internal or external stimulus, following this the act of reflection involves reflecting on context, content, process, and attitudes depending on what the unique situation calls for. This then leads to new comprehensions that can possibly result in solving current or future problems of practice. Despite creating a framework outlining the process of reflection, LaBoskey argues that attitudes for reflection, specifically the ones outlined as necessary by Dewey (open-mindedness, responsibility, and wholeheartedness) are more important to the process than simply going through the steps.

Adopting an alternative view, Griffiths and Tann (1992) see reflection as a linking of personal and public theories rather than a bridging of theory and practice. They argue that reflection depends on the 'ability to uncover one's own personal theories and make them explicit' (p. 72) and educators should value practitioners' personal theories whilst guiding them through the journey of 'theorising from their practice' (p. 71). Griffiths and Tann identify five levels of reflection that operate in a temporal manner with the first stages starting with reflectionin action, in the classroom and moving towards incorporation of dialogue and research:

Griffiths and Tann's (1992) reflective levels:

- 1. Rapid reaction
- 2. Repair
- 3. Review
- 4. Research
- 5. Retheorising and reformulating

The first two levels of the framework (rapid reaction and repair) are characterised as reflection-in-action and encapsulate a sense of immediacy with rapid reaction being automatic intuitive action and repair being a pause on the spot to deal with an unexpected event. The remaining levels are defined as reflection-on-action with each taking place over a longer period of time than the previous. The authors emphasize the importance of engaging with each level, underlining that remaining on one level leads to superficial reflection no matter which level this is.

Also taking a temporal approach to outlining different forms of reflection Loughran (1996) writes about three types: Anticipatory, Retrospective and Contemporaneous. Loughran (1996) emphasizes the importance of 'the "when" of reflection (the time of reflection in relation to the pedagogical experience)' (p. 17) stating the timing can have a great effect on what one learns from the process as their thoughts and actions are likely to differ at each point. Anticipatory reflection, as the name suggests, takes place before the experience however Loughran (1996) makes clear that this is not to be taken as simply planning a lesson. Engaging in anticipatory reflection involves considering possible scenarios that might occur within the unique complexities of one's own context. Retrospective reflection, looking back at the experience (reflection-on-action in Schön's work), is the form that most likely comes to mind when one thinks of reflection. Engaging in this type of reflection, one needs

to go beyond their overall judgement of the experience, be it positive or negative, and aim to create a learning from it by asking 'how' and 'why' questions. Contemporaneous reflection is the form where teachers 'can learn from and about their practice in action' (ibid, p.107) similar to Schön's reflection-in-action. Analysing student teachers' reflections Loughran (1996) identified that they engage in two different types of contemporaneous reflection:

'One is a thoughtful approach to a perceived problem during practice and is able to be reconstructed and explained by the student-teacher without too much difficulty. The other is an almost subconscious action which 'just happens' and the student-teacher has difficulty explaining why.' (p. 161)

This finding can possibly be seen as the difference between reflection-in-action and knowing in action, the latter of which is defined as more intuitive (Schön, 1983). It also provides clarification to the criticisms (Eraut, 1995; van Manen, 1995) surrounding the notion of reflection-in-action as it suggests that in some instances despite the busy nature of classrooms the teacher can step back and reflect on practice within the practice, in others this process takes place much more intuitively and subconsciously.

Reflective levels/typologies

Another perspective taken to understand the concept of reflection is outlining its conceptual levels and different types of reflection.

One of the early attempts to define reflection types or levels came from the work of van Manen (1977) (Larrivee, 2008). Van Manen (1977) divides reflection into three hierarchical levels as technical, practical, and critical. In the technical level, reflection is focused on means rather than ends with the main concern being efficacy. In the practical level the focus shifts towards an examination of underlying assumptions and predispositions as well as the goals of practice (Zeichner, 2005). Finally, at the highest level of reflection, the critical level, the focus widens to take into consideration the socio-political, moral, and ethical concerns (Zeichner, 2005). Criticizing van Manen's (1977) reflective levels, LaBoskey (1993a) argues that the hierarchical level view of reflection content neglects the more complex concerns of teaching related to instruction. She suggests viewing these levels as categories or potential foci for reflection instead and emphasizes the equal importance of each category.

Throughout the years researchers with differing goals also defined reflective types and levels in variations of van Manen's (1977) three-tiered reflection (See Table 2.1 Summary of Reflective Frameworks). Research included a review of reflective literature and outlining different types of reflection (Valli, 1997); creating a framework for the analysis of reflective essays (Hatton and Smith, 1995; Ward and McCotter, 2004; Kember *et al.*, 2008); creating a reflective typology to use as a basis for instruction (Jay and Johnson, 2002) and designing a framework to establish teachers' level of reflection (Larrivee, 2008).

Table 2.1	Summary of Reflective Frameworks	
Author	Purpose	Levels/Types
van Manen (1977)	Theoretical interpretation of	Technical
	reflection	Practical
		Critical
Valli (1997)	Synthesis of different types of	Technical
	reflective teaching	Reflection-in and on-action
		Deliberate
		Personalistic
		Critical
Hatton and Smith	Analysis of reflective writing	Descriptive writing
(1995)		Descriptive reflection
		Dialogic reflection
		Critical reflection
Jay and Johnson	Reflective typology to use as a	Descriptive
(2002)	basis for instruction and teaching	Comparative
	reflection	Critical
Larrivee (2008)	Assessment tool/framework to	Pre-reflection
	determine the overall reflective	Surface reflection
	level of a pre-service or practicing	Pedagogical reflection
	teacher	Critical reflection
Akbari et al. (2010)	Reflective inventory to determine	Practical
	English language teachers' level of	Cognitive
	reflectiveness	Learner
		Meta-cognitive
		Critical
Farrell (2015)	Reflective framework for second	Philosophy
	language teachers to guide	Principles
	reflection in every aspect of their	Theory of practice
	teaching	Practice
		Beyond practice

Setting out to discuss the meanings and origins of reflection as well as outline different types of reflective teaching, Valli (1997) identifies five types of reflection as (1) technical reflection, (2) reflection-in and on-action, (3) deliberative reflection, (4) personalistic reflection and (5) critical reflection. Similar to van Manen's (1977) hierarchical levels, Valli's (1997) reflection types address both the content and quality of reflection and Valli details the characteristics of each type. Content here refers to what teachers think about, whereas quality refers to how they think. Valli's categorization incorporates two levels from van Manen's hierarchy: technical and critical. The focus of technical reflection is general instruction and classroom management, the quality of this type is determined by how much the teacher's performance is in line with external guidelines. Following the technical type, she places Schön's reflection-in and on-action, this type of reflection puts emphasis on the teacher's own context and the uniqueness of it. According to Valli, deliberative reflection is the only type that escapes content related criticism as its content can be any type of teacher concern ranging from instructional strategies to learners, from curriculum to organizational matters. The quality of this type of reflection is determined by taking into account viewpoints from multiple resources including colleagues, field experts and research. Whereas personalistic reflection has a more intuitive focus and is concerned with the teacher's own personal growth and its quality stems from trusting one's own inner voice. While formulating this typology Valli acknowledges the possible overlap of individual types and their respective weaknesses, thus she encourages to use them in combination depending on one's context and purpose of reflection. Although these reflective types are not placed on a hierarchical continuum, Valli emphasizes the order that they are presented in and suggests that some types might be a prerequisite to others.

Referenced as possibly the best-known reflective framework in reflection literature (Moon, 2004), Hatton and Smith (1995) create a reflective framework to identify different types of reflective writing in student essays. Drawing from previous literature on reflection (Schön, 1983; van Manen, 1977) and adding to this the understandings that came from analysing reflective student essays, Hatton and Smith (1995) outline three forms of reflection as descriptive, dialogic, and critical. Classifying these three as reflection-on-action (Schön, 1983), Hatton and Smith place reflection-in-action as the highest form of reflection – the

ultimate goal of a professional. In doing so, they criticize Valli's (1997) mid-level placement of reflection-in-action, arguing that this form of reflection is the most complex and only develops after experience. Defining reflection as 'deliberate thinking about action with a view to its improvement' (1995, p. 40), Hatton and Smith's framework consists of four types of writing, three of which are classified as reflective. Describing events without providing any reasoning or justification is referred to as 'Descriptive Writing' and viewed as nonreflective. The first reflective type of writing, 'Descriptive Reflection', is characterised by displaying reasoning and recognition of alternative viewpoints in addition to a description of events. This is followed by 'Dialogic Reflection' which the researchers define as a 'stepping back' from events and having a 'discourse with self' that explores different explanations and possible alternatives for action. The final type outlined in the framework is 'Critical reflection', which possesses the same characteristics as the aforementioned typologies and refers to a type of reflection where an awareness of wider socio-political, ethical, and historical contexts is demonstrated. The general focus of Hatton and Smith's framework is on the quality of reflection, looking for evidence in the acts of describing, reasoning, justifying, explaining, and hypothesising. The exception to this is the critical reflection level where the content becomes the focus. Similar to Valli's (1997) standpoint on reflection types, Hatton and Smith emphasize that 'it is important that the types are not viewed as an increasingly desirable hierarchy' (1995, p. 35). There are numerous other reflective frameworks created with the purpose of analysing or evaluating reflection (Sparks-Langer et al., 1990; Tsangaridou and O'Sullivan, 1994; Bain et al., 1999; Ward and McCotter, 2004; Lee, 2005; Kember et al., 2008). These have not been included in this section due to their analytical purpose and will be discussed in detail in section 2.2 of the literature chapter.

Other reflective typologies include Jay and Johnson's (2002) three level typology created to use as a basis for instruction to teach reflection. Influenced greatly by Schön's work, Jay and Johnson seek out to 'demystify' reflection and create a framework that facilitates the teaching of it by making the concept more accessible. The researchers note the importance of reflecting on personal biases, assumptions and wider societal issues surrounding education, but also emphasize the value of reflection as a utilitarian problem-solving approach. Coming from this viewpoint they seek to create a typology that is applicable regardless of the content and context of reflection. The typology dimensions go from

describing the matter and setting the problem at the 'descriptive' level to reframing the matter with alternative views at the 'comparative' level and reaches to the 'critical' level where a new perspective is established. Although the dimension names are similar to existing frameworks in the literature Jay and Johnson (2002) do not exclude description from the reflective process. On the contrary they emphasize the importance of noticing and unpack the steps involved in describing a matter as involving 'finding significance in a matter so as to recognize salient features, extract and study causes and consequences, recontextualize them, and envision a change' (p. 78). Likening moving through the dimensions of the typology to a 'widening of the lens' (p. 79), Jay and Johnson provide guiding questions to be used at each stage of the way.

Setting out to create an instrument that assesses a teacher's level of reflection Larrivee (2008) synthesizes the literature on reflection and outlines three levels as:

- '(1) an initial level focused on teaching functions, actions, or skills, generally considering teaching episodes as isolated events;
- (2) a more advanced level considering the theory and rationale for current practice;
- (3) a higher order where teachers examine the ethical, social, and political consequences of their teaching, grappling with the ultimate purposes of schooling.' (p. 342)

After a literature review Larrivee (2008) creates descriptors of each level and sends out the survey to authors/researchers who have written about reflective practice for validation.

Upon receiving response from 40 participants the final form of the reflective framework consists of four levels:

Pre-reflection – non-reflective category where teachers react to situations without taking responsibility, described as a 'knee-jerk response' (p. 342)

Surface reflection – a focus on strategies, methods and what works rather than the end goal

Pedagogical reflection – reflection on teaching goals, bridging theory and practice as well as the influence of teaching on learners

Critical reflection – reflection on the wider moral, ethical context and an examination of beliefs

Akbari et al. (2010) argue that empirical studies on reflection suffer due to the concept not being operationalized. Criticizing the lack of reflection instruments that allow for the quantification of reflection, Akbari et al. (2010) create the English Language Teacher Reflective Inventory (ELTRI) that aims to determine teachers' level of reflectiveness. The formulation of the instrument is based on a comprehensive literature review through which a list of reflective behaviour was created. This extensive list was then categorized into five overarching components of reflection as: practical, cognitive, learner (affective), metacognitive, and critical. First versions of the inventory also included a moral component concerned with issues of justice and values; however, this was removed after the confirmatory factor analysis tests revealed a lack of significance.

Table 2.2 Akbari et al. (2010) English Language Teacher Reflective Inventory (ELTRI) components

<u> </u>	
Practical	items that deal with the tools and actual practice of reflection (journal writing, audio and video recordings)
Cognitive	teachers' attempt of professional development, including action research, attending a conference or workshop
Learner	teachers' reflection on their students, how they are learning and their emotional responses
Meta-cognitive	teachers' reflections on their own beliefs and personality
Critical	socio-political aspects of pedagogy and reflections on these including topics such as race, gender, social class

Farrell defines reflection as:

'a cognitive process accompanied by a set of attitudes in which teachers systematically collect data about their practice, and, while engaging in dialogue with others, use the data to make informed decisions about their practice both inside and outside the classroom' (Farrell, 2015, p. 123)

He adopts a holistic view of reflection and creates a reflective framework for second language teachers that aims to guide reflection in every aspect of their teaching including themselves as individuals. Farrell (2015) places great importance on widening the scope of reflection beyond reflection on practice, a focus that he argues is lacking in other frameworks as they have 'guided teachers on how to tackle technical issues without looking at the person who is reflecting' (p. 20). The framework is descriptive rather than being prescriptive and consists of five dimensions: Philosophy, Principles, Theory of Practice, Practice, and Beyond Practice.

Table 2.3 Farrell's (2015) Reflective Framework		
Concerned with the teachers' basic philosophy and looking at the		
'teacher-as-person' aims for the teacher to gain self-knowledge		
Reflection on teachers' assumptions, beliefs and conceptions of		
teaching and learning		
Reflection on all aspects of planning while attempting to put		
theory into practice		
Reflection on classroom practices including reflection-in, on and		
for practice		
Reflection on the moral, political, and social issues that influence		
teachers' practice both inside and outside the classroom		

Farrell (2015) uses an iceberg analogy for the framework and describes the dimensions up until Practice as the 'hidden' aspect of teaching. These include reflection on self, on assumptions, beliefs, and conceptions regarding teaching as well as reflection on the chosen methods to put theory into practice for different skills. The Practice dimension involves reflecting on classroom experiences and Beyond Practice coincides with the 'critical' level of other frameworks. Farrell (2015) displays the framework in a cyclical format with interaction between each dimension, and it is underlined that while the framework should be viewed as a whole, teachers can start reflection at any stage and essentially decide when and where to move onto, depending on what their individual practice calls for.

2.1.3 Defining reflection

A review of the literature shows that although reflection and reflective practice have become almost mandatory terms in education there are a lot of different interpretations of what the concepts mean (Farrell, 2012). As Loughran (2002) succinctly puts it:

'For some, it simply means thinking about something, whereas for others, it is a well-defined and crafted practice that carries very specific meaning and associated action' (p. 33).

Although moving away from its common-sense meaning, it is accepted that within research and the field of education thinking is not automatically seen as reflecting (Zeichner and Liston, 2014) as within these contexts reflection 'carries the connotation of deliberation, of making choices, of coming to decisions about alternative courses of action' (van Manen, 1991, p. 98).

Researchers have used the term reflection to encapsulate various meanings, it can be as small scope as looking at a single part of a lesson or much broader taking into account wider contexts that influence teaching, such as ethical, social and political considerations (Larrivee, 2008). While a multitude of researchers have studied reflection and provided understandings of it in the forms of reflective processes, frameworks, typologies and even definitions, what the concept entails still remains ambiguous with no widely accepted definition across professions (Day, 1993; Hatton and Smith, 1995; Beauchamp, 2015). This diversity on what the concept entails is not merely a matter of terminology as it influences every aspect of reflective practice (Beauchamp, 2006), making it difficult to create teacher education programs that promote reflective practice (Loughran, 1996) and for learners to understand what reflective practice is and how to engage with it (Jay and Johnson, 2002). In their literature review set out to understand the limitations of reflective practice in initial teacher training, Collin et al. (2013) found that teacher education programmes that aim to promote reflection differ in terms of how the programme is structured to better facilitate reflection, what students are expected to reflect on, the process of reflection, and the role of the practicum.

The vagueness of the concept and lack of consensus has been heavily and frequently criticised (Fendler, 2003; Akbari, 2007; Collin, Karsenti and Komis, 2013; Beauchamp, 2015).

Thompson and Pascal (2012) draw attention to the irony that although reflective practice is seen as a way to bridge theory and practice, the theoretical base of the concept itself remains underdeveloped. One thing exacerbating this situation is authors and teacher educators not defining what they mean by reflection or where their understandings of it come from (Farrell, 2018). Conducting a literature review of reflective studies in the field of TESOL, Farrell analysed a selection of 138 studies and found that more than half of them did not give any definition for what they meant by reflective practice. A common pitfall seems to be the assumption that when discussing reflection 'we all mean the same thing' (Farrell, 2018, p. 1). Despite this clearly not being the case, there are certain commonalities across the numerous definitions and practices of reflection. Mann and Walsh (2013) outline two of these as the importance given to experience and the view of reflection as both an intellectual and affective activity. Setting out to clarify the ambiguity of the concept Rogers (2001) synthesizes seven theoretical approaches and outlines four commonalities in the definitions summarizing 'reflection as a cognitive and affective process or activity that:

- (1) requires active engagement on the part of the individual
- (2) is triggered by an unusual or perplexing situation or experience
- (3) involves examining one's responses, beliefs, and premises in the light of the situation at hand
- (4) results in integration of the new understanding into one's experience' (p. 41).

Ward and McCotter (2004) also put forward the common elements of reflective practice that emerged from their literature review on reflective frameworks as: 'reflection is situated in practice, is cyclic in nature, and makes use of multiple perspectives' (p. 245).

Looking into the major conceptualizations of reflective practice Thorsen and DeVore (2013) conclude that 'no one thinker has this complex process figured out' (p.90). Likewise, Beauchamp who wrote her PhD thesis on understanding reflection in teaching (2006) states that 'this complex concept continues to escape our full understanding' (2015, p. 137). Within this current situation a way forward is to perhaps acknowledge that 'honesty about the imprecision is better than a pretence that we are dealing with an exact science' (Moon,

1999, p. 64); and for each researcher to clarify what they mean by reflection within the context of their research as advised by Farrell (2018).

2.1.4 Reflection in this study

The current study examines the use of a video observation tool for reflection and improvement of professional practices. The subject of reflection is the participants' own teaching practices, classroom experiences and actions. Thus, within Farrell's (2015) holistic framework of reflection (philosophy, principles, theory of practice, practice, beyond practice), this study is situated in the practice category. Taking the research focus and context into account the study adopts Hatton and Smith's (1995) simplistic yet on point definition that reflection is:

'deliberate thinking about action with a view to its improvement' (p. 40).

2.2 Analysing reflective writing

The literature shows various reflective frameworks/typologies that have been created to further our theoretical understandings (Schön, 1983; van Manen, 1977), outline different types (Valli, 1977; Jay and Johnson, 2002; Farrell 2015), and evaluate teachers' overall level of reflection (Larrivee, 2008; Akbari et al., 2010). In addition to these, there are frameworks and rubrics that have been created with the purpose of and through analysis of reflective artefacts. While it is commonplace for empirical studies to use theoretical frameworks for the analysis of reflective practice (Collin et al., 2013), researchers have also used the theoretical frameworks as a basis to create coding schemes, rubrics, and frameworks of their own that are more suitable for their data and study context. This section of the literature chapter will review the analytical frameworks for reflection, a summary of the frameworks examined can be found in Table 2.6 at the end of the section.

Looking into the promotion of reflective thinking within a pre-service teacher education program tailored to facilitate reflection, Sparks-Langer et al. (1990) created the Framework for Reflective Thinking. The coding scheme consists of seven types of language and thinking and is based on the researchers' belief that analysing students' language can illuminate their ability to explain and reflect on pedagogical concepts and classroom events. Mirroring van Manen's (1977) reflective levels hierarchy, the framework moves from no descriptive language to providing an explanation taking into account ethical, moral, and social factors

(see Table 2.6 for details). The framework was used to analyse pre-service students' reflective journals written after their practicum teaching experience and their interviews where students were asked to identify one successful and one less successful teaching instance and verbally analyse the event.

Table 2.4 Framework for Reflective Thinking (Sparks-Langer et al., 1990 p. 27)

Level	Description
1	No descriptive language
2	Simple, layperson description
3	Events labelled with appropriate terms
4	Explanation with tradition of personal preference given as the rationale
5	Explanation with principle or theory given as the rationale
6	Explanation with principle/theory and consideration of context factors
7	Explanation with consideration of ethical, moral, political issues

Another framework mirroring van Manen's (1977) reflective levels is that of Hatton and Smith (1995). Referenced as possibly the best-known reflective framework in reflection literature (Moon, 2004), Hatton and Smith (1995) identify four types of writing three of which are classified as reflective. Describing events without providing any reasoning or justification is referred to as 'Descriptive Writing' and viewed as non-reflective. The first reflective type of writing, 'Descriptive Reflection', is characterised by displaying reasoning and recognition of alternative viewpoints in addition to description of events. This is followed by 'Dialogic Reflection' which Hatton and Smith define as a 'stepping back' from events and having a 'discourse with self' that explores different explanations and possible alternatives for action. The final type outlined in the framework is 'Critical Reflection', this refers to a type of reflection where an awareness of wider socio-political, ethical, and historical contexts is demonstrated.

Bain et al. (1999) examined the use of reflective journals to facilitate student learning in the context of a one-year Graduate Diploma of Education course. Setting out to investigate the impact of content and context on reflective writing, the researchers placed 35 participants into four intervention groups: cognitive versus experiential and reflective dialogue versus

self-analysis. The participants were given different instructions and followed different procedures according to the intervention group they were in, however all students were requested to write weekly reflective journals during their 11-week practicum. Following LaBoskey's (1993a) suggestion, the researchers adopted a two-dimensional coding approach, separating the focus and level of reflection. Deriving coding categories from previous research and refining them to best represent their data, Bain et al. (1999) employed a five-point scale to determine the level of reflection with the levels moving from simple description to abstract thinking and formulation of personal theories: (1) reporting, (2) responding, (3) relating, (4) reasoning and (5) reconstructing. Following the coding, each journal entry was assigned two overall ratings: 'the characteristic level (level attained in the majority of segments) and the highest level reached within the entry' (p. 59). The coding categories describing the focus of reflection were summarized in four headings as focus on teaching, on self, on professional issues and on students or class.

Ward and McCotter (2004) set out to create a reflective rubric designed to focus on student learning and outcomes to shine light on the effects of the standards and assessment movement in teacher education in USA. Finding the existing reflective frameworks either designed to describe a process or lacking focus on reflection on student learning, the researchers take a grounded theory approach to analyse reflective writing and build the framework. While coding they take a liberal approach to identifying reflective segments and code any writing focused on a specific teaching action, holding the view that 'the fact that the action was being described implied deliberate thinking about the action and desired improvement.' (p. 248). In naming the rubric levels, Ward and McCotter (2004) draw on Hatton and Smith's (1995) framework and they outline four levels of reflection as routine, technical, dialogic, and transformative. Within these qualitative levels of reflection, routine reflection is defined by showing a lack of questioning, curiosity, and sense of responsibility as well as a tendency to place the blame on external sources. Technical is defined as instrumental, as in other frameworks in the literature, and having a focus on solving current teaching problems. Dialogic reflection adopts the same meaning as Hatton and Smith's (1995), an ongoing discussion with self or others and a consideration of alternative views. Likewise, transformative involves a questioning of fundamental assumptions and is a renaming of what is referred to as critical reflection in the literature. Similar to Bain et al.'s

(1999) double-lensed coding practice of focus and level, Ward and McCotter's (2004) reflective rubric examines both the dimension and quality of reflection. The quality is examined with the levels above, the dimension aspect on the other hand is divided into three as focus, inquiry, and change. By bringing in the dimensions of reflection they aim to understand what the teachers' focus on, how they ask questions regarding this focus and whether or not this questioning leads to change.

The approach of separating the focus and quality of reflection has also been previously employed by Tsangaridou and O'Sullivan (1994) in the context of pre-service physical education. The researchers investigate the impact of a new set of reflective assignments that place greater focus on analysing and criticising teaching practice (both self and others). Carrying out a comparative study, they request participants to keep reflective logs, analyse observed lessons of experienced teachers and write video commentaries on their own teaching. The three foci outlined in their framework are technical (related to the instructional and managerial aspects of teaching), situational (concerned with contextual issues) and sensitising (reflection on social, moral, ethical, and political aspects of teaching). Tsangaridou and O'Sullivan (1994) make a point to emphasize that these foci are not hierarchical, and their values should not be contrasted, instead all three should have their place in pre-service teachers' reflections. By situating reflection on social, ethical, and moral aspects of teaching (generally referred to as critical reflection in the literature) as a dimension of reflection and not the highest achievable level, the researchers are aligned with LaBoskey's stance (1993). In the framework the levels of reflection categories are listed as description, justification, and critique, where the pre-service teacher is expected to describe the matter of reflection, then provide a rationale in the next level and finally offer an explanation or evaluation of the reflected teaching action in the critique level. Unlike the foci, Tsangaridou and O'Sullivan (ibid.) state that the levels of reflection are cumulative with each one building up on the previous. The levels of reflection also appear in combinations of description & justification and description & critique.

Leijen et al. (2012) adopt Tsangaridou and O'Sullivan's framework in their study where they analyse the reflective writing of dance students. They criticize previous frameworks formed on a levels only basis such as van Manen's (1977), emphasizing their weakness stating that 'the focus of reflection (technical, practical and critical reflection) has been used to

determine the value of reflection' (p. 125) and this kind of approach undermines the importance of the technical. The researchers bring together the literature on reflection, Tsangaridou and O'Sullivan's framework and Moon's (2004) approach of looking at the quality of reflection as a 'superficial-deep' continuum. Through this they add a fourth level of reflection as 'discussion' where they expect to see the students discussing alternative solutions to changing their practice.

Lee's (2005) reflective framework created to analyse the reflective thinking of pre-service secondary maths teachers in a Korean context also employs a double perspective of content and depth. While the content focus aims to uncover pre-service teachers' main concerns, the depth focus evaluates how they develop their thinking process. Taking place during the practicum of a teacher education program, the study's data includes reflective journals, observations, and interviews. The participants reflected both on their program classes over the span of three months and on their own teaching upon viewing a video recording of their lesson. Lee's (2005) framework assesses the depth of reflective thinking in three levels: Recall level (R1) which involves a description of experiences without a view of alternative explanations; Rationalization level (R2) where the pre-service teacher interprets the situation by providing a rationale, essentially answering the question 'why'; and the Reflectivity level (R3) where the pre-service teacher displays an intention of change or improvement for the future and takes multiple perspectives into account. No specific categories for analysing the content of reflection were provided.

Another reflective coding framework emerged from the field of health care, Kember et al. (2008) outline a four-category coding scheme for assessing written reflection. Originally designed as a seven-category reflection assessment scheme based on Mezirow's (1991) work (Kember et al., 1999), the framework was refined into four-categories to provide ease of use. In order to refine the original framework Kember et al. (2000) developed a questionnaire to measure reflective thinking levels. The questionnaire that consisted of four scales tested successfully for validity and reliability, thus served as an empirical basis to the creation of the new and simplified coding scheme. The four categories were outlined as habitual action/non-reflection, understanding, reflection and critical reflection. Akin to Hatton and Smith's (1995) reflective framework, Kember et al.'s (2008) coding scheme starts with a level of non-reflection and the highest level is determined as critical reflection.

Although the terminology is the same, Kember et al.'s (2008) critical reflection is a display of transformation of perspective rather than a focus on ethical, moral, and social perspective. Tested within the context of a radiography course on clinical placement, Kember et al.'s (2008) framework differs from the afore mentioned as the analysed written work are not based on teaching practices, but clinical practices and general course work. Additionally, the intended use of the coding scheme is assessing reflection within programmes rather than analysing reflection for research purposes. Another point of difference is in the coding decisions, while dividing reflective papers into segments/chunks is commonly practiced (see Ward and McCotter, 2004), Kember et al. (2008) argue that reflective papers should be assessed as a whole and recommend assigning the examined paper the highest level of reflection present.

Looking into how pre-service and in-service ELT teachers reflect in a Turkish context Yesilbursa (2008; 2011a, 2011b) also implemented a double coding method to analyse reflective essays and dialogues. The coding was done once, focusing on the mode of reflection with the aim to answer the question 'how' participants reflect; and the second time around on the content of reflection aiming to find out 'what' the participants reflect on. Using thematic analysis for the content coding, Yesilbursa (2008, 2011) developed a reflective rubric for the mode of reflection. Initially created as part of her doctoral thesis, a case study looking into three in-service university teacher educators' reflections, the coding scheme aimed to uncover reflections on reasons and solutions as well as the affective aspects of reflecting. Yesilbursa (2011a) emphasizes the lack of frameworks looking into the stance (positive/negative) taken while reflecting as one of the motivations in developing this reflective rubric. While the original rubric consisted of ten codes, in her later study looking into Turkish pre-service teachers' reflections on their microteaching, a condensed version of six codes was used (see Table 2.5). Within this coding scheme the general, positive, and negative reflections were grouped as descriptive; while reflections on reasons, solutions and new discoveries were classified as dialogic reflection which is seen as more conducive to professional development (Yesilbursa, 2011b).

Table 2.5 Yesilbursa (2008, 2011) reflective rubric			
Codes	Original rubric / Condensed version		
R	General reflection		
R+	Positive reflection	Descriptive reflection	
R-	Negative reflection		
RR	Reflection on reasons		
RS	Reflection on solutions	Dialogic reflection	
RN	Reflection on new discoveries		
R?	Inquiring reflection		
RM	Reflection in the form of metaphor		
RC (+/-)	Reflection on change		
Comm	Commitment		

Setting out to create a framework for reflective writing that could be used in pre-service programmes across fields, Lane et al. (2014) provide a helpful analysis of existing reflective frameworks. The authors identify two dimensions of reflection as breadth and depth. Breadth of reflection is described as a sociological approach focused on the extent of the teacher's concerns, thus the content of reflection. In this dimension the focus of reflection moves from self to other and reaches the interests of all. Thompson and Thompson (2018) refer to this as a broadening of the lens to see the bigger ethical, moral, social picture relating to the context. The frameworks focusing on breadth of reflection are largely based on the work of van Manen (1977). Whereas depth of reflection is defined as a psychological approach that is concerned with the thinking processes and is focused on the nature or form of reflection. Largely based on the work of Dewey (1933) and Schön (1987), the levels in this dimension move from describing to higher order thinking and the process is viewed as cyclical. Having outlined these dimensions, Lane et al. (2014) argue that a framework focusing on depth of reflection would be more generalisable as this dimension of reflection appears more teachable and less dependent on context. Refining and reconstructing their initial framework through analysis of student essays, the authors present a four-level framework as: (D1) purely descriptive, (D2) descriptive and evaluative, (R1) low-level

reflection, and (R2) high-level reflection. Low-level reflection refers to providing a justification in addition to evaluating. For reflection to be considered high-level there needs to be consideration of alternative future actions and a view for improvement.

In summary, although there is no agreed upon best method for analysing reflection, an issue identified as one of the methodological critiques of reflection (Collin et al, 2013), analysis of written reflection appears prevalent. A number of different approaches have been taken: thematic analysis with no set framework (Yesilbursa, 2011), using existing theoretical frameworks and creating a new framework based on literature and data findings (Ward and McCotter, 2004). Methodological differences also appear in the further analysis and presentation of the findings with some researchers using quantitative methods, others qualitative (Lee, 2005) or mixed methods (Yesilbursa, 2011a, 2011b).

Frameworks differ in their approach to analysing reflection as outlined by Lane et al. (2014). Some combine the dimensions of breadth and depth within a single framework (Sparks-Langer et al., 1990; Hatton and Smith, 1995). In these frameworks the first levels focus on depth, and breadth of reflection is brought in at the final levels with an emphasis on taking into consideration ethical, moral, political matters. Others analyse both breadth and depth with separate coding schemes (Bain et al., 1999; Ward and McCotter, 2004; Tsangaridou and O'Sullivan, 1994; Lee, 2005); and some are solely focused on analysing depth of reflection (Kember et al., 2008; Lane et al., 2014). It is worth bearing in mind that when discussing critical reflection researchers might be referring to depth, breadth, or both. Just as 'reflection' taking on different meanings according to the author, the same issue seems to be present with 'critical' reflection.

Table 2.6 Summary of reflective frameworks

Author/Year	Reflective levels/dimensions	Salient features
	Framework for Reflective Thinking	
	1 No descriptive language	
	2 Simple, layperson description	
	3 Events labelled with appropriate terms	
	4 Explanation with tradition of personal	Lovels mirror van Manon's (1077)
Sparks-Langer et	preference given as the rationale	Levels mirror van Manen's (1977)
al. (1990 p. 27)	5 Explanation with principle or theory	reflective level hierarchy
	given as the rationale	Based on use of language
	6 Explanation with principle/theory and	
	consideration of context factors	
	7 Explanation with consideration of ethical,	
	moral, political issues	
	Descriptive Writing	Based on van Manen's (1997) reflective
	Descriptive Reflection	levels
Hatton and Smith	Dialogic Reflection	Descriptive writing is considered non-
	Critical Reflection	reflective
(1995)		Authors place importance on not
		viewing the types as 'an increasingly
		desirably hierarchy' (p. 35)
	Five-point level of reflection scale for	
	levels of reflection	
	1 Reporting	
	2 Responding	
	3 Relating	A tour discounies along the common to
	4 Reasoning	A two-dimensional coding approach
Bain et al. (1999)	5 Reconstructing	was adopted separating the focus and
		level of reflection
	Categories for focus of reflection	
	Focus on teaching	
	Focus on self	
	Focus on professional issues	
	Focus on students or class	

Table 2.6 Summary of reflective frameworks

Author/Year	Reflective levels/dimensions	Salient features
Ward and McCotter (2004)	Qualitative levels of reflection Routine Technical Dialogic Transformative Dimensions of reflection Focus Inquiry Change	Reflective quality levels based on Hatton and Smith's (1995) framework moving from disengaged from change at routine to change taking place in transformative During coding, any writing focused on a specific teaching action was considered reflective.
Tsangaridou and O'Sullivan (1994)	Level of reflection categories Description Description & Justification Description & Critique Description, Justification & Critique Focus of reflection categories Technical Situational Sensitizing	Cumulative nature of reflection levels is emphasized The focus of reflection categories are similar to those in reflection literature with different titles: situational is concerned with contextual issues and sensitizing relates to a focus on ethical and moral aspects of teaching.
Leijen et al. (2012)	Quality/level of reflection (argumentation) levels: Description Justification Critique Discussion Focus of reflection levels: Technical Practical Sensitising	Adapted form of Tsangaridou and O'Sullivan's (1994) framework. Discussion refers to reflection beyond self-evaluation and a consideration of alternatives for change

Table 2.6 Summary of reflective frameworks

Author/Year	Reflective levels/dimensions	Salient features
	Depth of reflective thinking levels	Framework moving from description, to
	R1 – Recall	providing rationale and ending with a
	R2 – Rationalization	display of intention to
Lee (2005)	R3 – Reflectivity	change/improvement.
		A content focus coding was done
		separately with no set categories/levels
		provided.
	Four-category scheme for determining	Coding scheme based on Mezirow's
	levels of reflection in written work:	(1991) work.
	Habitual action/non-reflection	
	Understanding	Intended to use for assessing all types
Kember et al.	Reflection	of reflective writing.
(2008)	Critical reflection	
		Critical reflection refers to a
		transformation of perspective rather
		than focus on ethical, moral
		perspectives.
	Reflective rubric:	Created due to a lack of reflective
	R general reflection	frameworks focusing on reflective
	R+ positive reflection	stance.
Yesilbursa (2008,	R- negative reflection	
2011)	RR reflection on reasons	First three (R, R+, R-) are categorised as
	RS reflection on solutions	descriptive reflection and the last three
	RN reflection on new discoveries	(RR, RS, RN) are categorised as dialogic reflection.

Author/Year	Reflective levels/dimensions	Salient features
	Four-level framework for reflective	Low-level reflection (R1) involves a
	writing	justification in addition to describing
	D1: Purely descriptive	and evaluating.
lane et al. (2014)	D2: Descriptive and evaluative	High-level reflection (R2) refers to
Lane et al. (2014)	R1: Low-level reflection	displaying a view of
	R2: High-level reflection	change/improvement for future action
		that is based on principles of quality
		teaching.

2.3 Reflective Practice for Teacher Education and Professional Development

The reflective view of learning is based on the notion that teachers learn from looking back on and examining their practice and teaching related experiences (Richards and Farrell, 2005b). Reflection allows practitioners to become aware of the significance of their experiences (van Manen, 1991) and is often seen necessary to make sense and learn from these experiences (LaBoskey, 1993b). Seen as a way of making the tacit explicit, it is generally accepted that reflection on teaching leads to more skilled and more capable teachers (Zeichner and Liston, 2014). Evidence-based reflection allows teachers to articulate the what, how and why of their actions as well as their impact (Farrell, 2012), and studies have shown a link between pre-service teachers' ability to reflect and the effectiveness of their future teaching practices (Hüttner, 2019). With these affordances, engaging in reflective practice is seen central to teacher education and professional development (Mann, 2005; Farrell, 2019).

Loughran (1996) states that for teachers to be able to incorporate reflection into their professional practices, they need to experience it as learners in their pre-service teacher education programs. This position is shared by many, as reflection is seen as a way for novice teachers to uncover the theories underpinning their practice and shape 'their emerging personal philosophy of teaching' (Watts and Lawson, 2009, p. 610), to better understand the complexities of teaching (Freese, 2006) and to draw links between theory and practice (Farrell, 2019). Elements of reflective practice have been increasingly included in teacher education programs to varying degrees and Yost et al. (2000, p. 47) argue that

'producing teachers who will engage in critical reflection should be a primary mission of every teacher education program'.

There are numerous approaches practitioners can take to engage in reflection for professional development. In their book detailing various approaches to professional development for language teachers, Richards and Farrell (2005b, p. ix) present eleven procedures: 'workshops, self-monitoring, teacher support groups, journal writing, peer observation, teaching portfolios, analysis of critical incidents, case analysis, peer coaching, team teaching and action research.' Though presented as procedures for professional development, most of these involve reflecting on practice to varying degrees. Methods of implementation can vary according to the level of collaboration (individual reflection, peer/supervisor dialogue), the chosen combination of procedures (e.g., observation and reflective writing) and the artefacts used. As one can use the more traditional tools and carry out pen and paper observations, implement checklists; or include technology with audio/video recordings, online discussion and blog based reflective writing/teaching portfolios (Farrell, 2019). In accordance with the reflective procedures implemented in this study, this section will now cover research exploring writing for reflection and video observation for reflection.

2.3.1 Writing for Reflection

Educators across many fields, including psychology and management, recommend the use of reflective journals; and journal writing is widely used in university contexts in the field of teacher education to facilitate reflection (Bain *et al.*, 1999). Viewed as a universally used tool to further reflective practice (Orland-Barak, 2005), elements of reflective writing are commonly incorporated into pre-service teacher education programs as a course requirement with teacher candidates being asked to write reflections on teachings they observe and/or as a part of their practicum experience (Yesilbursa, 2011b).

Journal writing is seen as a way for student teachers to 'document their thinking about learning and teaching' (Loughran, 1996, p. 7) with the assumption and hope that looking back on these writings 'will be a catalyst for reflection'. The importance of documenting one's thoughts after a teaching experience is reiterated by Richards and Farrell (2005b, p. 69) as they note without some form of record, the teacher 'often has no substantial recollection of what happened during a lesson' which in turn means the experience is

unlikely to be used as a catalyst for learning. Summarizing the power of writing for reflection, Farrell (2019b, p. 45) states: 'the act of writing has a built-in reflective mechanism; teachers must stop to think and organize their thoughts before writing and then decide on what to write.' Indeed, this view is echoed as journals can provide space for teachers to analyse their own teaching (Richards and Farrell, 2005b), help teachers draw links 'between existing and new knowledge' (Cohen-Sayag and Fischl, 2012, p. 21) and essentially become 'a window into teachers' thinking' (Davis, 2006, p. 285). There are various different forms of journal writing depending on the reader, the focus, the purpose, the frequency and the medium (Richards and Farrell, 2005b).

Bain et al. (1999) conducted an intervention study examining the impact of different journaling conditions on the reflective abilities of 35 pre-service teachers. The participants who were in a one-year graduate diploma programme were randomly put in one of four intervention conditions and were asked to keep a journal throughout their 11-week practicum placement. The groups differed according to the required content of their journals (experiential or cognitive) and the level of collaboration after writing (individual self-analysis or engaging in reflective dialogue). The cognitive approach to journal writing encouraged students to 'examine theory in light of practice and to interpret practice from a theoretical perspective' (p. 55), whereas in the experiential approach students were expected to 'focus on their own experience and to construct a personal understanding of professional practice.' (p. 55). All students received brief written feedback on their weekly submitted journal. Following this feedback, the students in the reflective dialogue condition had a 15-minute dialogue with their supervisor (the researcher) based on their journal content of the week, whereas those in the self-analysis condition were asked to write a short commentary on their journal entry of the week taking the feedback into account. For the analysis Bain et al. (1999) took on LaBoskey's (1993) suggestion of separating the 'focus' and the 'level' of reflection and adopted a two-dimensional approach. They analysed the level of reflection using the five-point reflection scale they developed (see Table 2.6), and the focus of reflection was analysed according to set categories, both based on previous research. The findings showed that the average characteristic level of entries was mostly Level 3 (Relating) at 54%. While only 5% of the entries were characteristically Level 5 (Reconstructing), only 1% was coded at Level 1 (Reporting). Observing individual differences in levels of reflection, the researchers note that students' perceptions of the function of journal writing differed with some viewing it as a 'simple record of events' (p. 62) and others as a space for reflection and learning from experience to improve practice. The data showed 'some indication' that those who view writing as a space for reflection 'were more likely to reflect at higher levels' (p. 63).

The analysis of the development of their reflective skills showed the students' reflective writing improved over time with the majority reaching Level 4 or 5 at least once in their latest entries, although the researchers note that the 'the most dramatic improvement occurred immediately after the first entry' (p. 62). Comparing the students who improved their writing with those who did not, Bain et al. (1999) found that there were no differences in terms of their assigned intervention conditions. Rather the only significant predictors of the level of their latest journal entry were 'the student's performance on the first journal entry (an indicator of initial reflective ability) and the average length of journal entries (an indicator of the student's willingness to devote effort to the task)' (p. 63).

Comparing the focus of reflection in the cognitive and experiential groups, the researchers found while the first group wrote more on a variety of themes relating to teaching and learners in the class, the latter wrote more on themselves as teachers. The experiential group was more likely to write about plans of improving their practice. Despite these content differences, the intervention conditions had no significant effect on the level of reflection. Comparison of the reflective dialogue and self-analysis groups showed that this intervention had no significant impact on the overall focus or level of reflection. Though both conditions showed improvement equally, it was found that students in the self-analysis group showed improvement quicker. Although there was no apparent difference in the levels of reflection in self-analysis/dialogue groups, Bain et al. (1999) note that the interview data underlined the 'need for journalling to go beyond an individual endeavour' (p. 68) as the students commented on the value of the written feedback they received to their writing. The researchers conclude that in this study 'written feedback was able to fulfil a similar role to that of verbal dialogue' (p. 69).

While Bain et al.'s (1999) study showed that pre-service teachers' reflective writing improved over time with the majority reaching the highest levels eventually, Hatton and Smith's (1995) study offers contradictory findings. Examining the nature of reflection of pre-

service teachers in a teacher education programme in Sydney, Hatton and Smith (1995) analysed pre-service teachers' reflections implementing their own reflective writing framework (see Table 2.6). The findings showed that the pre-service teachers mostly wrote at the descriptive reflection level (60-70%) with only three reports showing evidence of critical reflection. Throughout the programme the teacher candidates were required to participate in numerous tasks designed to encourage reflection, including reflective writing, video-recording teaching experiences and peer discussion. An examination of which reflective tasks had the most significant impact on the development of reflection showed that the pre-service teachers benefited highly from engaging in dialogue with their critical friends. Hatton and Smith (1995, p. 41) summarize this finding as:

'This suggests that a powerful strategy for fostering reflective action is to engage with another person in a way which encourages talking with, questioning, even confronting, the trusted other, in order to examine planning for teaching, implementation, and its evaluation.'

Hatton and Smith's (1995) findings on the importance of reflective dialogue somewhat contradict those of Bain et al.'s (1999). As the latter group of researchers found that while the student teachers reported benefiting from engaging in reflective dialogue, no impact of this was found on the development of their reflective skills. However, it is important to note that they did receive written feedback, which was reported to be akin to verbal dialogue. Thus, from these two studies it can be concluded that having some form of interaction (written or verbal) with another person (peer or supervisor) contributes to the process of reflection.

Having established the positive impact of feedback on student teachers' reflective writing, Bain et al. (2002) set out to examine the effect of different feedback conditions. 35 student teachers in their 6-week teaching practicum submitted weekly journals and were placed into one of the four feedback conditions. The feedback provided either focused on the level of reflection by asking the student teachers questions to get them to reflect at a higher level, or it focused on the content of the reflection through responding to any teaching issues the student teachers wrote about. The second condition had to do with the level of feedback provided, categorized as low level and high-level questioning. The findings showed that while all students reported benefiting from the feedback they received, 'feedback that

focused on the level of reflection attained was more effective in bringing about improvement in journal writing than feedback that focused on teaching issues' (p. 171).

Taking another approach to examining the implementation of different journal and feedback types, Lee (2007) explored the use of dialogue and response journals for promoting reflection with pre-service English language teachers. Stating that most of the studies investigating the use of reflective journals take place within the practicum context, Lee (2007, p. 322) remarks 'there is no reason why learning to reflect should wait until the practicum'. Coming from this position, the researcher investigates the use of reflective journals with students taking an ELT methodology course. The participants (n=31) were divided into two groups: one group wrote and exchanged email journals with Lee for two teaching semesters (weekly for semester one, bi-weekly for semester two), the second group wrote weekly response journals that they turned in in three instances in the first semester and two in the second. Lee's (2007) level of response differed between the two groups, while the first group received detailed weekly responses where she commented on salient points and asked questions, the second group received more general comments as multiple journals were submitted at the same time and the response was delayed. Lee analysed sections of the reflective journals based on Jay and Johnson's (2002) indicators of reflectivity. The findings showed that the pre-service teachers had become more reflective and included 'additional perspectives, their own values and experiences, as well as the broader context within which teaching and learning take place' (Lee, 2007, p. 326) in their reflections. Both groups valued the journal writing experience, stated that journal writing became their thinking space and Lee (2007) did not observe or make clear any differences according to the journal type the students engaged with. The dialogue journal group found regular communication with the teacher educator beneficial, however Lee (2007, p. 327) notes a potential issue with dialogue journals stating that some teachers might view the process as an opportunity to get advice from their instructor 'rather than a tool for developing individual reflection.' Still, based on this experience Lee (2007) emphasizes the importance of starting the journaling process with plenty of guidance for the pre-service teachers, and possibly slowly reducing the amount of advice given by the teacher educator to allow the students to develop their reflective skills. Negative aspects the pre-service teachers noted about the process were its time-consuming nature and the occasional lack of ideas to write about. Regarding this, one student even confessed to making something up for the reflective writing, which s/he found meaningless.

Taking the guidance provided for reflection online, Lai and Calandra (2010) examined the impact of two different computer-based scaffolds on novice teachers' reflective journal writing. Working with pre-service teacher education students (n=65) taking a technology integration course during their field experience, the researchers investigated the effect of using question prompts and writing process displays as scaffolds for reflective writing. As part of their field experience the participants were required to write reflections on a critical incident after each practice teaching. For the explanatory study design, three webpages were created assigning the students to either one of the two treatment groups or the control group to write their reflections. The analysis of the reflections was carried out using Ward and McCotter's (2004) reflection rubric (see Table 2.6). Looking at the highest level of reflection reached in the writings, the findings showed that while the control group's reflections remained in the first two levels of the rubric, the treatment groups' writings were mostly in the higher two levels. The quantitative analysis also showed that the scaffolded groups wrote slightly longer entries than the control group, with further correlation analysis displaying a positive relationship between level of reflection and the length of writing, corroborating the findings of Bain et al. (1999). The qualitative analysis resulted in finding three factors that might have influenced students' journal writing experience: '(a) the specific requirements conveyed in the scaffolds; (b) the structure of the scaffolds; and (c) the use of the critical incidents to anchor the journal writing' (p. 429). Specifically, the participants commented on how the scaffolds helped clear up the usual vagueness pre-service teachers face when they are asked to engage in reflection (Mann and Walsh, 2013), the structured approach turning a complex task into manageable steps, and the impact of referring to critical incidents on sparking one's memory. With no statistical difference found between the two types of scaffolding, Lai and Calandra (2010) conclude that pre-service teachers benefit from guidance when engaging in reflective writing which led them to produce longer and more critically reflective entries. The researchers underline the importance of guidance stating that their participants commented on feeling 'disoriented and unmotivated to write' (p. 433) in the absence of such guidance for reflection.

Also implementing Ward and McCotter's (2004) reflection rubric, Watts and Lawson (2009) examined the use of the rubric as a tool to develop beginning teachers' critical reflection. The participants were 20 pre-service teachers undertaking a PGCE course to become Information and Communication Technology (ICT) teachers to ages 11-16. Students are normally required to write lesson evaluations as part of the PGCE course, in this programme they also had to post selected evaluations to an online discussion forum for peer review and comment on each other's evaluations. The participants were introduced to Ward and McCotter's (2004) reflection rubric at the end of their first school placement. Towards the end of their second school placement, they were asked to apply the rubric to the evaluations they had written so far, noting any change in criticality. This meta-analysis was then submitted as a self-assessment of their reflective progress. Carrying out an analysis of these self-assessments, the researchers note that earlier lesson evaluations mostly consisted of descriptive writing at the routine level. This finding is hardly surprising as Watts and Lawson (2009, p. 612) add 'this form of low-level reflection might be typical of beginning teachers who are more focussed upon survival than on improvement.' However, a more critical stance was taken in the later reflections. As a result of the study the students gained an understanding of the value of reflection, the importance of action in the reflective process, and the value in shifting one's thinking from teacher centred to learner centred. Regarding the implementation of the rubric, some students suggested that perhaps a mastery of routine reflection and concerning issues is required before a teacher can reflect at a higher level.

Implementing Hatton and Smith's (1995) levels of reflection framework for analysis, Orland-Barak (2005) investigated the use of reflective portfolios with in-service teachers. The 32 teachers in the study participated in two different mandatory professional development courses: while one course focused on writing 'process' portfolios which expected teachers to experiment with writing a portfolio and find out its possible affordances, the second course asked teachers to write 'product' portfolios where they were expected to use portfolios as a representation of learning. Another difference between the two courses was that while the product portfolios were assessed the process portfolios were not. The findings showed that the language of reflection was predominantly descriptive, regardless of the type of portfolio and content. In both portfolio types, critical reflections that related

to practice on a moral and ethical level remained 'untold'. Entries coded as dialogic reflection were also few in number, with the product portfolio group surprisingly reflecting more dialogically. Orland-Barak (2005) states a possible explanation for this to be the absence of training teachers on how to write at higher reflective levels, indicating that engaging in higher levels of reflection most likely requires training and guidance. Though the participants found the portfolio experience valuable, the researcher observed that the participants were displaying a 'neat representation of their professional development' (p. 37) which most likely explains the lack of critical reflection. This form of writing, also present in other studies as stated by Orland-Barak (2005), links to the criticisms towards the implementation of reflective writing in an assessed and mandatory context.

The studies reviewed so far display various forms of reflective writing being employed and differing findings on the impact of writing on reflective ability and its improvement over time. This situation is no different in the Turkish context. Examining pre-service teachers' experience with engaging in reflective writing via blogs Akkoyunlu et al. (2016) report that the blogs provided the participants a space for them to document their experience, learn from their peers, allowed student teachers to evaluate themselves holistically and develop their critical thinking and writing skills. Conducting an experimental study to investigate the impact of blog writing, Cirak Kurt and Yildirim (2021) found that pre-service teachers who wrote blogs displayed higher levels of reflective thinking. However, the study of Dos and Demir (2013) reported that the analysis of the blogs with Hatton and Smith's (1995) reflective framework showed a high majority of the blog entries to be descriptive (90%) and only 5% to reach critical reflection.

Carrying out their study with third-year English language teaching students, Turhan and Kirkgoz (2018) analysed the reflective reports students wrote after observing lessons in a primary state school. The analysis carried out using inductive content analysis with Bain et al.'s (1999) reflection scale showed that the participants mostly wrote at the reporting level without adding any comments or insights. There was close to zero indication of reconstructing, the highest level of the scale, in the reflections. Looking at the reflections over time revealed that there was no change in the participants' level of reflection. The researchers put forward the individual nature of reflective writing as a possible reason for these findings. Another possible explanation might be related to the pre-service teachers

watching other teachers' videos, as in their study Seidel et al. (2011) found watching one's own video to be a more engaging experience compared to watching others. Also implementing Bain et al.'s (1999) reflective framework for analysis, Bener and Yıldız (2019) investigated the use of various blogging activities to promote pre-service ELT teachers' reflection within the context of practicum. The researchers asked 18 final year ELT students to complete fourteen blog activities. The activities included critical incident analysis on practicum experiences, video-critique of experienced teacher videos and reflecting on the implementation of specific activities. Findings showed that the pre-service teachers did reach the highest level of reflection 'Reconstructing' with 12% of the entries coded to this level and the average reflection level corresponded to level 3, in line with Bain et al.'s (1999) original study. More than half (61%) of the entries were coded as medium level or higher.

Numerous studies investigated how engaging in reflective writing impacted teachers' reflective skills, how different conditions had an impact on reflective skills and teachers' perceptions on their experience of carrying out reflective writing. While participants generally report to have benefited from reflective writing in various ways, research shows a mixed picture concerning its impact on improving reflection. For instance, Cohen-Sayag and Fischl (2012) state that based on their observations as supervisors, writing reflective journals did not improve pre-service teachers' level of reflection despite the length and intensity of the process. Building on these experiences, the researchers set out to explore the link between reflection and teaching practice. In their longitudinal mixed methods design study, Cohen-Sayag and Fischl (2012) investigated if writing a structured journal throughout a year improved reflective writing and if these changes correlated with assessments of pre-service teachers' teaching practices. Carrying out a content analysis implementing Jay and Johnson's (2002) reflective typology, the researchers found that majority of the participants improved in reflective writing over the year. The reflections were mostly coded as descriptive which largely included pre-service teachers' concerns with classroom management. This led to the authors concluding that reflective writing requires practice. They found the link between reflection and teaching practice to be unclear as one group showed improvement in reflective levels but no change in their teaching practice. On the other hand, those who reflected in a critical manner did display improvement in

teaching. The authors summarize 'there can be an improvement in reflective writing without improvement in teaching and vice versa' (Cohen-Sayag and Fischl, 2012, p. 32).

To summarize, the impact of writing for reflection on the development of reflective skills appears to be unclear. Although a number of studies report improvement in reflection levels over time (Bain et al., 1999; Lai and Calandra, 2010; Cohen-Sayag and Fischl, 2012), others did not observe similar improvement (Hatton and Smith, 1995; Orland-Barak, 2005; Turhan and Kirkgoz, 2018). Most of the reviewed studies reported participants engaging in reflective writing on a regular basis for a long period of time, ranging from six weeks (Bain et al., 2002), to a semester (Bain et al., 1999; Turhan and Kirkgoz, 2018), to as long as a whole year (Lee, 2007; Cohen-Sayag and Fischl, 2012). Although some of these report an improvement throughout the process, interestingly Bain et al. (1999) noted that the most significant change in their participants' level of reflection occurred after the first entry which opens up questions regarding how much engagement in reflective writing is needed for the improvement of reflection skills. Despite the differing findings, two common themes present in the reviewed studies are related to guidance for reflection and the impact of interaction/feedback. Both studies that incorporated guidance and those that did not, conclude that teachers need guidance for reflective writing to be able to reach higher levels of reflection (Bain et al., 2002; Orland-Barak, 2005; Lee, 2007; Lai and Calandra, 2010). Additionally, studies found that adding an element of interaction, whether it is the form of dialogue or written feedback, has a positive impact on the improvement of reflective skills (Hatton and Smith, 1995; Bain et al., 1999; Lee, 2007; Akkoyunlu et al., 2016).

2.3.2 Issues with Writing for Reflection

Despite the prevalence of engaging in writing for reflection and its reported benefits, there are several criticisms made towards its implementation. Carrying out a review of the positive and negative aspects of reflective journals, O'Connell and Dyment (2011, p. 47) ask the question 'is the jury still out?' on the use of reflective journals and underline that the tendency in reflection literature has been to 'push aside' the reported issues and challenges of journaling while placing an unbalanced focus on the benefits. Synthesizing the findings of over 75 studies on reflective journaling, O'Connell and Dyment (2011) list the benefits as providing space for learning, placing the students in the centre of the learning process, and fostering reflective thinking. The challenges they outline include the lack of training or

structure provided to students, the excessive use of journals which they term as 'journaled "to death" (p. 53), the time commitment required for journaling, questions surrounding whether or not journal writing actually improves quality of reflection and last but not least issues surrounding the assessment of journals and the students 'writing for the instructor' (p. 52) as a result.

A number of these issues appeared in the articles reviewed above, some studies reported no or little improvement in teachers' reflective skills (Hatton and Smith, 1995; Orland-Barak, 2005; Turhan and Kirkgoz, 2018), the necessity to provide students/teachers with proper guidance for them to reach higher levels of reflection was emphasized (Orland-Barak, 2005; Lee, 2007; Lai and Calandra, 2010), and some studies noted participants engaging in performative reflection (Orland-Barak, 2005; Lee, 2007).

Examining in-service teachers' reflective levels, Orland-Barak (2005) noted the absence of critical reflection which requires practitioners to reflect on their experiences by taking into account the wider ethical, moral, and sociological aspects and existing systems. Underlining the assessed nature of the portfolios in the study context, Orland-Barak (2005, p. 41) questions how in-service teachers can express criticality towards the institution, system and policies that employ them and states that her study 'suggests that within a centralized system of accountability and contrived collegiality, the documentation of reflection at critical levels is problematic'. Linked to the drawbacks of mandatory reflection, pre-service teachers in Lee's (2007) study reported struggling with ideas to write, with one participant confessing having to make something up in order to fulfil the journal requirement. Hobbs (2007, p. 405) conducted a study primarily focusing on 'the problematic nature of required reflective practice'. The participants of the ethnographic study were 12 English language teachers with different levels of experience, enrolled in a TESOL certificate course in the UK. Hobbs (2007) examined the participants' attitudes towards a mandatory reflective assignment of the course: writing a teaching practice journal. The findings showed that teachers who did not believe in the usefulness of reflection and found it a waste of time tended to write 'display journal entries' (p. 410) to please the course tutors, Bain et al. (1999) had also noted the possible link between teachers' perceptions of and attitudes towards writing for reflection and the level of their reflective writing. Hobbs (2007, p. 410) also notes that the writing prompts provided for the assignment tended to be 'leading and

repetitive' which in turn resulted in 'strategic responses'. Additionally, reflective activities that required collaboration did not always take place as 'it was easy enough to "fake it"' (p. 411). Indeed, Mann and Walsh (2017, p. 18) state that one of issues with written reflection is that 'the focus of attention becomes the actual writing itself', which in turn can lead to teachers faking it or writing what their instructor wants to read in order to fulfil course requirements (Farrell, 2019) as was the case in Hobbs's (2007) study. Hatton and Smith (1995, p. 43) summarize this point neatly as they state that reflective journals can sometimes be 'altered to accommodate to the perceived expectations of the reader, rather than to suit the writer's own end'. In order to overcome this issue and promote genuine reflection, Farrell (2019) notes that some teacher educators have chosen to stop grading reflective journals. Hobbs (2007, p. 415) also states that reflection 'should never be assessed in its early stages' and emphasizes that practitioners should have the chance to develop their reflective skills 'in a non-threatening atmosphere'. Other suggestions by Hobbs (2007) include allowing individuals to choose their preferred method of reflection and introducing reflection slowly and with lots of guidance.

2.4 Video in Teacher Education

With the development of technology, video as a tool and resource has become increasingly integrated in both pre- and in-service teacher education (Hüttner, 2019). Despite its current prevalence, research into the use of video in teacher education started to emerge in the early 1970s (Baecher *et al.*, 2018). While video's integration into teacher education programmes began decades ago, advances in digital videography and software development have contributed to a rapid increase in its use (Seidel *et al.*, 2011; Blomberg *et al.*, 2013). Comparing video to other technologies that have proved to have limited value for teacher education in the long run, Brophy (2004a, p. 303) notes that 'video technology offers affordances that appear to ensure its permanent value as a teacher education tool' and due to these affordances its presence appears likely to continue or even possibly increase (Sherin, 2004a). Indeed the literature review of Gaudin and Chaliès (2015) on video viewing in teacher education and professional development shows that the use of video recordings for both the training of pre-service teachers and the professional development of in-service teachers has increased in all subject areas and various countries around the world over the past decade. The authors summarize the three main reasons of this increase as

video providing better access to classroom events, technical advancements facilitating the video viewing process and video being 'increasingly used as a means to facilitate the implementation of institutional reforms' (Gaudin and Chaliès, 2015, p. 42). Similarly, Sherin (2004a) also underlines a shift in reasons to use video, stating that while at its emergence video recordings were mainly used as substitutes of live observation due to its time saving affordance, nowadays the reasons to integrate video 'are pedagogical as well as managerial' (Sherin, 2004a, p. 9).

Gaudin and Chaliès' (2015, p. 41) extensive literature review displays the vast variety in video use as they categorized the 250 articles they examined according to four elements: 'teachers' activity as they view a classroom video, the objectives of video viewing, the types of videos viewed, and the effects of video viewing on teacher education and professional development.' According to the subcategories, the authors outline the objective of video viewing as to develop reflective skills, learn various teaching skills, or other objectives in line with learning goals. The viewed video can be of unknown teacher activity, peer teaching, one's own practice, or a selection of videos that suit the learning goals. In a more recent literature review Baecher et al. (2018) found video studies differed in terms of the focus of viewing the video, how the video was viewed (individually or collaborative viewing), and the mode of engagement – in other words the various tasks and activities surrounding and following video viewing. Providing a detailed report of video use in language teacher education Mann et al. (2019) outline a wide range of video implementations including viewing classrooms, using video banks/resources, carrying out self-evaluation via video, engaging in video-stimulated recall, video in online training, virtual reality (VR), remote video teaching and webinars. In line with the use of video in this study, the literature review will mainly focus on viewing videos of own teaching for reflection and professional development.

2.4.1 Affordances of video

Linking its continuous growth to the affordances video presents, Brophy (2004a, p. 287) emphasizes that the unique value of video is in its ability to convey 'the complexity and subtlety of classroom teaching as it occurs in real time, with a richness and immediacy that written descriptions or transcripts cannot match'. Sherin (2004b, p. 11) summarizes the affordances of video in three main headings: '(a) video is a lasting record; (b) video can be

collected, edited, and recombined; and (c) video sustains a set of practices that are very different from teaching.'

The nature of digital video recordings allows one to carry out multiple procedures such as repeated viewing, pausing, rewinding, focus selection (Hüttner, 2019), editing, sharing, and tagging (Mann *et al.*, 2019). As Sherin (2004a, p. 13) put it succinctly 'video affords the luxury of time'. Providing a lasting record of teaching, video relieves any pressures on memory when one intends to engage in self-monitoring (Kaneko-Marques, 2015; Hüttner, 2019). It also lends itself to the creation of video libraries and provides the opportunity to view different practices that would have not been possible otherwise (Hüttner, 2019), allowing teachers access to different classrooms to observe various instructional and pedagogical strategies (Sherin, 2004a). This access can shift the often isolated nature of teaching (Sherin, 2004a) and also can be implemented as a means to display teaching instances that would remain abstract without the assistance of visual media (Marsh and Mitchell, 2014).

Having a detailed recording of their practice gives teachers the chance 'to engage in fine-grained analyses of classroom practice' (Sherin, 2004a, p. 14), places them in the position of the observer (Akcan, 2010) thus allowing them 'to enter the world of the classroom without having to be in the position of teaching in-the-moment' (Sherin, 2004a, p. 13). With video, teachers can not only examine their own practice, but they also gain the opportunity to observe student-student interaction that could go unnoticed during the lesson (Richards and Farrell, 2005b). Recordings of classroom practice can also be used as a prompt for further collaborative discussion and reflection (Marsh and Mitchell, 2014).

2.4.2 Limitations of video

Despite its many affordances, using video for reflection is not without drawbacks. Having a camera in the classroom can be intrusive (Richards and Farrell, 2005a) and become a source of anxiety and nervousness for teachers (Lofthouse and Birmingham, 2010; Tülüce and Çeçen, 2016), resulting in unwillingness to engage with video-based observation. Technical drawbacks include issues with setting up the camera, dealing with file transfer and connectivity problems in the case of employing online systems (Lofthouse and Birmingham, 2010; Crichton, Edmett and Mann, 2019). However, one of the most commonly mentioned limitations is the restricted view due to camera/microphone positioning (Hüttner, 2019).

Although video can provide great access to classroom teaching, often decisions need to be made regarding where to point the camera and how much its perspective actually captures (Marsh and Mitchell, 2014). Unless multiple cameras and microphones are used -which would increase its intrusive nature- it is not possible for video to capture everything in the complex nature of classrooms. As Sherin puts it 'when the camera is focused on the class as a whole, it can be difficult to see or hear what individual or groups of students are doing' (2004b, p. 10). One other limitation noted by researchers is video's inability to capture contextual features (Sherin, 2004b; Payant, 2014). While this is expected, it can become a hindrance when the classroom video is the only source an observer/supervisor/mentor has access to provide feedback on, thus it needs to be taken into account when implementing video observations.

2.5 Video Observation for Reflection

2.5.1 Memory-based versus video-based reflection

Called the 'best record of a lesson' (Richards and Farrell, 2005b, p. 44) due to the level of accuracy and wholeness it provides compared to written or audio recording, the affordances of video make it a great tool to support reflective practice. As video use is increasingly viewed as possibly 'one of the most promising practices in developing reflective practice' (Welsch and Devlin, 2007, p. 54), several studies have been conducted to investigate the affordances of video based reflection compared to memory based reflection (Welsch and Devlin, 2007; Rosaen et al., 2008; Calandra et al., 2009, 2018; Kong, 2010). Rosaen et al. (2008) conducted a study with three pre-service teachers looking into how video might help reflection on discussion-based teaching in comparison to memory-based written reflection. The participants, pre-service elementary teachers in an intensive internship programme, were asked to videotape two lessons. Following these lessons, they were first asked to write reflections without reviewing the video, then watch the full lesson video, select parts for analysis and provide written reflections on the selected sections. No prompts, guidance or questions were provided for either of the reflective activities. Carrying out a cross-case analysis, Rosaen et al. (2008) divided the reflective writings into chunks and looked at both the focus of the reflections and to what extent the participants adopted an analytical or evaluative stance. The findings showed that video allowed for more specific comments in reflective writing. While general and vague comments were more prevalent in the memorybased reflections, in the video condition the participants went into greater detail even writing about specific students. The focus of reflection also shifted between the two conditions, with video-based reflection resulting in a higher focus on instructional aspects rather than classroom management and greater emphasis placed on learners rather than the teachers themselves. All participants reported viewing video-based reflection as more accurate and beneficial compared to memory-based reflection. Rosaen et al. (2008, p. 357) noted that video allowed pre-service teachers to both notice the discrepancies between their perception of the lesson and the recorded reality, and 'in some cases affirm theory to practice connections.' Based on this finding, the authors conclude that 'dissonance does not need to be negative to lead to learning; it just needs to jar complacency' (Rosaen *et al.*, 2008, p. 358).

Implementing a similar study design with web-based video technology and eight pre-service teachers from four disciplines, Kong (2010) conducted a quantitative content analysis to examine the participants' reflections before and after video viewing. The findings showed that student teachers generated more reflective notes (50% more) after engaging in video browsing, and their reflections were at a deeper level. Despite these overall results, Kong (2010) notes that the depth of reflection did not change in every aspect of teaching that was examined – namely aspects related to lesson planning and student-teacher relations. Thus, the author notes that video alone might not provide student teachers with sufficient support and recommends further dialogue and guidance to assist pre-service teachers in developing their reflective skills. Also taking a quantitative approach Welsch and Devlin (2007) carry out a counterbalanced design study, dividing the participants into two with one group engaging in memory-based reflection and the other video-based reflection. For their reflections the participants, 34 pre-service special education teachers, were asked to complete a six-question open-ended questionnaire. The analysis indicated that students participating in video-based reflection scored slightly higher on the reflection profile, despite this slight difference a great majority of the students reported video-based reflection to have enhanced their reflective skills.

In one of their studies part of a larger body of research investigating video-enhanced reflection, Calandra et al. (2009) examine the implementation of two guided reflection activities -one with video one without- with two groups of pre-service teachers. The group

using video was given instruction on video editing and was asked to record several lessons and reflect on them in writing using a critical incident protocol. The non-video group had a post lesson meeting with their university supervisor focusing on areas for improvement and was then asked to write a reflection using the same critical incident form. The authors analysed the five written reflections from each group using two frameworks: the framework of Sparks-Langer et al. (1990) to analyse levels of reflective language and another multidimensional coding model they created focusing on the time, type and competency of reflections. The findings showed that the video reflection group produced longer and more pedagogically linked reflections than the non-video group which reflected mostly on interpersonal relations and classroom management. While the reflections of the non-video group tended to consist of observations and technical descriptions of teacher and student behaviour; the video reflection group displayed shifts in their perspectives and transformation of their thinking about teaching.

In a more recent study, Calandra et al. (2018) used a counterbalanced research design to compare pre-service science teachers' reflections on their teaching when they were written based on memory, by using audio recordings of their lesson or video recordings of the lesson. The comparative element in this study is slightly different from the aforementioned as in this study all participants were asked to video record their microteachings and edit the video to identify critical incidents. Only after this phase they were separated into groups to write reflections on these critical incidents having access to either the edited video clips, only the audio or just their memory. As this process was repeated three times, all participants got to experience each condition once over the course of seven weeks. The authors used Ward and McCotter's (2004) reflection rubric to analyse the reflection papers and found that the pre-service teachers produced significantly higher quality reflections when they had access to the video compared to the audio.

2.5.2 *Video-based reflection studies*

In line with the increasing prevalence of video in teacher education, there are numerous studies investigating the use of video for developing reflective practices. Conducting a literature review of studies specifically looking at participants recording and examining their own teaching performances, Tripp and Rich (2012) state that despite the general consensus of viewing video as a powerful tool for reflection, studies greatly differ in terms of how they

use video and the implement reflection tasks and frameworks. The authors identify six dimensions where reflective studies differ as:

- '(1) type of reflection tasks,
- (2) the guiding or facilitation of reflection,
- (3) individual and collaborative reflection,
- (4) video length,
- (5) number of reflections and
- (6) ways of measuring reflection' (Tripp and Rich, 2012, p. 680).

As can be seen from Tripp and Rich's (2012) subdivisions, studies using video for reflection can be categorized in numerous ways. However, for the purposes of this study the primary sub-sections will be based on the career stage of the participants, namely studies looking at the pre-service context and in-service context.

2.5.3 Video-based reflection in pre-service contexts

In their recent literature review looking into the use of video for the professional development of teachers, Hamel and Viau-Guay (2019) examined 89 articles published between 2004 – 2015 and noted that a majority of the studies they reviewed (66%) took place in a pre-service context mostly in the field of mathematics or science education. As mentioned above (Tripp and Rich, 2012), studies into pre-service teachers' video-based reflection differ in terms of the number and length of videos used, how the videos were used and what the preferred manner of reflection was post video viewing. While the overarching focus is to examine the impact of video on reflective practice, studies focus on a variety of different aspects and implement various methods to do so.

A common approach taken is for participants to select and edit short segments of their classroom recordings for reflection (Yerrick, Ross and Molebash, 2005; Rhine and Bryant, 2007; Fadde, Aud and Gilbert, 2009; Trent and Gurvitch, 2015). The video reflections can be followed by reflective writing (Harford, MacRuairc and McCartan, 2010; Snoeyink, 2010), mentor discussion (Calandra *et al.*, 2006; Sydnor, 2016) or a combination of both (Lofthouse and Birmingham, 2010). Moving beyond the individual reflective activities, some studies focus on peer discussion. This can be in the form of an in class discussion on video segments (Harford and MacRuairc, 2008; Harford, MacRuairc and McCartan, 2010) or online peer

feedback (Rhine and Bryant, 2007; Oner and Adadan, 2011). Lastly, building upon simple video segment selection, some researchers investigate the use of video annotation tools for reflection (van Es and Sherin, 2002; Bryan and Recesso, 2006; Colasante, 2011; Fadde and Sullivan, 2013; McFadden *et al.*, 2014).

The case study of Calandra et al. (2006) looked at a pre-service teacher reflecting via digital video, the teacher made recordings of two of her lessons and was instructed to select clips of meaningful instances. The selected clips were later used as the base of post observation discussion with a mentor teacher. Snoeyink's (2010) study also looked at video self-analysis with eight pre-service teachers from different subject fields during their teaching practicum. The lessons were videotaped four times with one camera focused on the teacher and another on the learners; and after each lesson the participants completed a rating scale to assess their teaching. Additionally, they were also required to participate in individual and focus group interviews. Lofthouse and Birmingham (2010) conducted their study with students registered in a Post-graduate Certificate in Education (PGCE) course. The data was collected within the practicum of the course, the participants recorded their practicum teaching and subsequently analysed their videos for critical incidents. The critical incident analyses were followed by a post lesson student-mentor discussion. The findings that were common amongst these studies are as follows: the participants mentioned that watching their own videos gave them an outsider's perspective into their practice and facilitated their move from technical and superficial aspects of teaching to a deeper level of reflection. While findings relating to reflection level were drawn from participants' comments and informal observation in the studies of Snoeyink (2010) and Lofthouse and Birmingham (2010), Calandra et al. (2006) employed a thematic analysis using Sparks-Langer et al.'s (1990) critical reflection framework. Snoeyink's (2010) participants emphasized the difference between their recall of the lesson and what they saw on video. Another point made was the assistance of video viewing in reducing irritating personal habits such as tone of voice, speed of talking and poor posture. Focusing on a different advantage of video viewing, the participants of Lofthouse and Birmingham (2010) mentioned that the video recordings served as evidence and an objective account of classroom instances. A key addition to this was that the participants stated that seeing their practices for themselves had a greater effect than being told about it by their supervisor and the visual data

facilitated their acceptance of the comments made. Based on their findings Lofthouse and Birmingham (2010, p. 16) conclude that 'video interventions have the potential to change the balance of power in mentoring relationships and the styles of interaction that mentors and student teachers adopt.'

Rhine and Bryant (2007) take a dialogic stance regarding reflection and state that a collaborative environment with peers and supervisors is needed for pre-service teachers to develop their reflective practices. Designing their study accordingly, the researchers asked their participants to record one of their lessons, select a two-to-four-minute segment and upload it online including a description of the chosen segment and a couple of questions for feedback from their peers. The authors also mentioned that students in their context had complaints regarding the time their supervisors allocate for them for feedback, thus having the chance to share their practices online and receive feedback from their peers was noted as a positive aspect of the project. Additional benefits included students getting the opportunity to hear different opinions, suggestions and see various practices. The two most discussed topics online were found to be peer support and classroom management issues. In relation to reflective dialogue, analysing the literature on video-based reflection, Tripp and Rich (2012) corroborate Rhine and Bryant's (2007) stance and state that 'teachers prefer to engage in video analysis for reflection in collaboration with colleagues over reflecting alone and feel that the most important recommended changes come from these collaborative groups.' (p. 679).

Harford and MacRuairc's (2008) study also had a peer collaboration focus; they looked at the development of a community of practice within pre-service teachers in a PGCE programme with the use of peer-videoing as a reflective tool. While confirming the findings of Rhine and Bryant (2007) the study also found that students were able to transfer their teaching skills despite the differences in their teaching subjects. In line with the comments from Lofthouse and Birmingham (2010), the participants emphasized the benefits of seeing over hearing, more specifically they stated that being able to watch a methodology being implemented was a great benefit. A noteworthy comment made by the participants relating to the structure of the video element was its unassessed nature. The student teachers noted that this activity being assessed in any shape or form would have negatively impacted their engagement and reflection. This is interesting as researching the influence of instructional

conditions on the reflections of dance students Joksimović et al. (2019) found that students in the graded condition produced higher level self-reflections. Comparing self and peer video viewing, Harford et al. (2010) state 'while videoing of one's work is hugely informative, peer-videoing can be transformative' (p. 59) and conduct a peer-videoing study. Participants consist of twenty pre-service teachers; they record each other teaching and select a maximum ten-minute clip of their lesson to be viewed and discussed by a group of both peers and tutors. Findings showed that the students' focused on the importance of planning for different level students and that classroom management was a frequently discussed topic.

Fadde et al. (2009) conducted a study that brings together video editing and written reflection. The pre-service teachers enrolled on a reflective teaching course went through a process divided into four stages. First the pre-service teachers' lessons were recorded by their supervisors, after their lesson the participants watched their videos, wrote a reflective report on their performance, selected, and edited video parts that complement their written reflection and completed the task by posting their edited videos on their electronic portfolio page. Fadde et al. (2009) gave preference to having someone record the lessons over setting up a camera in the classroom arguing that 'active videotaping' is a key element of video observation. They state that a person operating the camera both provides flexibility in focus and takes the stress of having to deal with possible technical matters off the observed teacher's shoulders. Indeed participants in other studies noted the stress of setting up and managing video recording equipment as a limitation (Harford and MacRuairc, 2008; Lofthouse and Birmingham, 2010). The video editing activity seemed to provide students with guidance, thus leading to a greater focus on critical moments and making the students teachers more student centred and self-critical. A similar video editing study was conducted by Trent and Gurvitch (2015), however building on top of general video editing Trent and Gurvitch (2015) argued that editing with a specific theme would lead to deeper analysis thus deeper reflection so requested the students to focus on a specific pedagogical practice and analyse their development in that particular focus by reflectively comparing their performance in different lessons over time. On the topic of guidance for reflection, Tripp and Rich (2012) found that while frameworks, checklists etc. helped focus their reflection, teachers largely preferred to select what they focused on themselves.

2.5.4 Video annotation studies

Taking the video analysis techniques one step further from watching videos for critical incidents and editing videos with various video editing software, some researchers have investigated the use of video analysis and annotation tools for reflective practices. van Es and Sherin (2002) designed a software tool called Video Analysis Support Tool (VAST) to improve teachers' noticing skills. Emphasizing the importance of noticing in reflection, the authors outline three characteristics of noticing as the identification of significant events in the lesson, linking these meaningful classroom instances with principles of teaching and learning, and being able to interpret classroom interactions with contextual knowledge. Novice and expert teachers differ in terms of what they see in a classroom video; while novice teachers' comments tend to be literal descriptions, expert teachers provide descriptions that are connected to general teaching and learning issues (van Es and Sherin, 2002). Drawing attention to this gap, van Es and Sherin (2002) strongly argue that the skill of noticing should be taught in teacher education programs. With this goal in mind the study used VAST with pre-service mathematics and science teachers. In the intervention study half of the participants wrote their reflective essays based on their VAST analysis while the other half watched their classroom videos and wrote a reflection as usual. The findings showed that all of the student teachers in the intervention group moved to higher analytical levels: they moved away from chronological descriptions of classroom events towards analyses focused on specific incidents.

Criticizing the generally unsystematic and purposeless manner of reflection via self-videos Bryan and Recesso (2006) designed a web-based video analysis tool (VAT) to promote self and collaborative reflection of student teachers in a systematic manner. The authors argue that student teachers cannot critically reflect on their practice without 'directed, systematic and purposeful' (Bryan and Recesso, 2006, p. 32) guidance to use video recordings for reflection. The system worked with pre-installed cameras in the classroom, the recorded videos were stored on a secure server thus the users did not have to deal with issues such as setting up the camera, transferring and uploading the video and due to its online nature, the system could be accessed anytime anywhere. VAT offered tools to create, refine, view, and add notes to clips for analysis and also had collaborative features allowing to share edited clips and reflections. Prior to recording their lessons, the student teachers were trained on

the use of VAT and asked to write about their beliefs related to teaching and student learning. Afterwards they were asked to identify classroom instances that represented and contradicted their beliefs and write a reflective analysis on a chosen number of classroom instances. This individual reflective cycle was followed by a collaborative viewing of selected clips with peers which was then followed by the student teachers finding solutions to emerging issues, planning for future improvements, and implementing their action plans. Bryan and Recesso (2006) state that the task of finding possible solutions to their teaching issues prepared the pre-service teachers to deal with bigger challenges related to teaching. Using VAT for analysis also led to more focused observations for the teacher educators as they could get a better understanding of the pre-service teachers' shortcomings and needs by watching their VAT analysis of previous lessons. As for the students, the researchers stated that after using VAT for reflective purposes the pre-service teachers immediately started to look below the surface.

In their mixed methods study, McFadden et al. (2014) examined the use of a commercially available video annotation programme (VideoANT) for the reflective practices of science teachers in an online induction course. Underlining the challenges in providing direct feedback to student teachers prior to technological advancements, the authors state that the emergence of video annotation tools both provide a meaningful use of video and allow teachers to link feedback and reflections with evidence. Proving the point made by van Es and Sherin (2002) an examination of the annotations of the student teachers showed that their comments mostly consisted of descriptive and explanatory reflections and were highly focused on teacher behaviour. However, with time the reflections started to include evaluation and interpretation of practice as well as action plans for future lessons.

Studies looking into video observation seem to have moved from simply viewing the videos for reflection to using video editing software and video annotation tools with the aim of creating a more structured reflection process. Rich and Hannafin (2009) strongly suggest the use of video annotation tools for teacher education stating that 'video annotation tools offer the potential to support both the reflection and analysis of one's own teaching with minimal video editing as well as the ability to associate captured video with related student and teaching evidence' (p. 52). Körkkö et al. (2019) investigated the use of VEO for video observation with pre-service primary school teachers in Finland. 12 student teachers and 9

supervisors participated in the study. The student teachers recorded six videos of their peer teaching with the app with tag sets focused on communication, classroom atmosphere and motivation, and evaluation. Two of the videos were 25 minutes long and four of them were 10–15-minute short clips. Following this, the teaching students viewed their videos on the VEO portal and had the chance to add tags or comments. The researchers did not set specific guidelines for individual reflection prescribing the number or length of videos or any post video reflective activities. Supervisors, who were not in the classroom for lesson observations, viewed the lesson recordings online and gave feedback through the portal and then met the student teachers for a face-to-face discussion. Drawing data from focus groups, interviews, and video diaries the researchers found that all student teachers viewed the app as useful for their self-reflection. The specific affordances they noted were the chance to see themselves from an outsider's view, not having to rely on memory and focused lesson observations and reflections. However, they also stated that the employed tag sets were too narrow, and that supervisor feedback had a greater impact on their thoughts and teaching practices than watching their own videos. The supervisors underlined that the video clips did not provide them with the whole picture of the lesson and being left in the dark regarding contextual information resulted in them drawing incorrect conclusions and providing unhelpful feedback; clearly demonstrating how this drawback of video has implications in practice (Sherin, 2004b).

Investigating the use of VEO as a video annotation tool from the observer's perspective Çelik et al. (2018) conducted a study comparing three forms of classroom observation for professional development: paper-pen observation, mobile app supported and video observation. Two experienced EFL instructors at an English-medium university in Turkey carried out classroom observations implementing three conditions: traditional observation with paper and pen to take notes, observation and live tagging with VEO using a tablet, and setting up an unmanned video camera in the classroom followed by viewing and tagging the video on the VEO portal. The findings showed that each tool had its own specific affordances and limitations. For instance, in the traditional lesson observation method the observer's presence was not intrusive for the students and teacher, however it became a challenge to observe and take good notes at the same time. Although the presence was practically invisible, the act of writing to take notes became distractive – attracting the

curiosity of the students. When observing the lesson with VEO on a tablet, the tag system was found to be much more practical than note taking, and the observer noted the swiftness of tagging allowed them to keep up with the lesson progression and not miss any important instances. However, a caveat with this was the observer wanted to expand on the tags with notes which was not possible while tagging, leading to a post-lesson reviewing of the video to add relevant notes. Finally, in the video recording without an in-class observer condition, the affordances of VEO portal came to surface. Retrospective tagging and the ability to pause, replay, rewind the video for analysis were found beneficial. Tagging without having to keep up with the fast pace of the lesson made the process easier and not needing observer presence in the classroom was noted as a possibly time saving factor. On the flip side, the unmanned camera in the classroom was found to be more obtrusive than the observer. In addition to the noted affordances and limitations, a significant finding Çelik et al. (2018) outline is the impact of the different methods on the roles of the observer and the observed teacher. In traditional classroom observation, the notetaking and analysis of classroom instances is carried out by the observer; however, with VEO the observer and teacher had the chance to review the video collaboratively by looking at the tags and essentially carrying out a joint analysis with both parties assuming an active role.

2.5.5 Video-based reflection in in-service contexts

Compared to pre-service contexts, studies looking at video reflection in in-service contexts are relatively low in number (Hamel and Viau-Guay, 2019; Hüttner, 2019). Major and Watson (2018) carried out a systematic scoping review of the use of video for in-service teacher professional development and examined 82 studies published between 2005 – 2015. Similar to video reflection studies in pre-service contexts, Major and Watson (2018) found that research mostly took place in the fields of mathematics and science education and was largely located in the USA. Looking into how video was used in these studies, Major and Watson (2018) found the most popular video source to be teachers' own classrooms or peers' classrooms, noting that own classroom videos were generally used to stimulate video-based reflection. In terms of how the videos were viewed, the authors found collaborative viewing to be the largely preferred method. The professional development focus of the studies was mostly eliciting and supporting reflection.

Producing a large body of research in video based reflection, Sherin and van Es (2009) examine in-service mathematics teachers' participation in two video clubs over the course of a year and the influence of this experience on teachers' professional vision and noticing skills. The video clubs took place once or twice a month with four teachers in one group and seven in the other. The researcher would record one teacher's lesson and select a 5-minute segment for the group to watch and discuss in the meeting which lasted around an hour. The researcher would also act as a facilitator in the meetings by prompting the participants to elaborate on what they noticed in the videos and attempting to direct their attention to student thinking. Analysis of the video club meetings was carried out focusing on the first and last meetings to investigate any development. Findings showed that in the last meeting the teachers displayed increased attention to student thinking and engaged in detailed analysis of student ideas. This is in contrast with their earlier discussions which focused on pedagogical issues with comments being mainly descriptions and evaluations. Having conducted previous studies that showed the effectiveness of video clubs (Sherin, 2004b; van Es and Sherin, 2008), in this study the researchers set out to explore if the influences of the process continued outside the video club context. Pre and post noticing interviews were conducted to investigate this, and the findings showed the participants shifting from description to an increased focus on student learning - similar to the development found in video club discussions. The researchers also conducted classroom observations to investigate if the video club discussions had any influence on teachers' instruction, the findings of which showed that the teachers attended to student comments and thinking to a higher degree.

Emphasizing the limited research on how video analysis influences teacher change, Tripp and Rich (2012b) examined three different teacher groups' participation in a semester long video-based reflection process. Employing a multiple case study approach, the researchers recruited seven teachers across three instructional settings. At the beginning of the two-month process the teachers were asked to identify three areas they wanted to work on and were provided training for the use of the selected video annotation tool (MediaNotes). For the self-analysis, the teachers were asked to record a lesson, analyse their teaching by tagging, commenting, and selecting clips using the video annotation tool and then discuss their analysis with their group. Data sources included observations of recordings of the

group discussions, semi-structured interviews with the participants after they repeated the video analysis cycle four times and the tagged lesson videos. The six over-arching themes that emerged from the analysis showed that video helped teachers '(a) focus their analysis, (b) see their teaching from a new perspective, (c) trust the feedback they received, (d) feel accountable to change their practice, (e) remember to implement changes, (f) see their progress' (Tripp and Rich, 2012, p. 728). Drawing comparisons between the video reflection process and previous feedback methods they had experienced, teachers stated that 'they were more likely to change their practices' (p. 732) with video analysis and that 'video allowed them to literally "see" the need to change with their own eyes' (p. 733). In relation to using the video annotation tool, teachers choosing the focus of reflection increased their feelings of ownership on the process.

Also focusing on professional vision, Seidel et al. (2011) investigate the impact of different video sources (self or other) on teachers' knowledge activation and professional vision with in-service science teachers in Germany. Implementing an experimental design, the researchers had three groups of teachers: video-experienced teachers watching their own teaching, video-experienced teachers watching other's teaching and video-inexperienced teachers watching other's teaching. All participants were asked to watch the video and pause to make written comments. The findings showed that watching one's own teaching provided 'a more activating experience' (Seidel *et al.*, 2011, p. 266), meaning that they experienced a deeper level of engagement.

Setting out to find an alternative to traditional classroom observations, Kane et al. (2015) report on their large scale study where the treatment group teachers recorded and submitted their own lessons for further feedback and discussion. The participants were made up of 347 teachers and 108 administrators randomly assigned to treatment and control groups. Although the focus of the study was not teacher self-reflection, rather using video observation instead of traditional classroom observations for evaluation purposes, it is worth mentioning as a significant study with in-service teachers. The video observation group selected which lessons they wanted to record and submit for evaluation. After submission, their supervisor viewed the video and added tags and comments as feedback, which was then followed by a post-observation discussion. The findings showed that the treatment group teachers became more self-critical and more likely to identify specific

changes in practice; video allowed them to notice previously unnoticed self and student behaviour; and they viewed the observations as fairer, felt better supported by their supervisors and were less defensive during the post observation meetings.

Similar to studies conducted in the pre-service context, the in-service context studies report affordances of engaging in video-based reflection. These include video providing new perspectives through giving the teachers an outsider's view and the existence of video evidence leading to less defensive feedback meetings. Teachers also had an increased focus on student learning (Sherin and Van Es, 2009) and developed their critical viewing and got better at identifying areas of improvement (Kane *et al.*, 2015). In line with Major and Watson's (2018) literature review, the studies in this section employed collaborative viewing and discussion with peers for reflection and did not have an element of reflective writing – a common form of reflection in pre-service contexts.

2.5.6 Video-based reflection in English language teaching

In their literature review where Baecher et al. (2018) analysed over 100 articles from a sixyear period (2011-2016) to examine how video was used in teacher education, the researchers found the highest number of studies were conducted in mathematics education which was followed by TESOL. Although TESOL studies came in second comprising 14% of the analysed studies in Baecher et al.'s (2018) literature review, Hüttner (2019, p. 474) states that in the field of English language teaching, the research into the use of video resources has increased however it is not as established as the 'vibrant research scene' in other subjects namely science and mathematics. Indeed, Mann and Walsh (2013) criticize the state of reflective practice in applied linguistics and TESOL stating that there is an overreliance on written and individual forms of reflection; and a lack of data-led accounts on how reflection gets done. Despite the relatively scarce number of studies, researchers have investigated pre-service teachers' reflections on their video recorded micro teachings as part of various programme modules (Yesilbursa, 2011; Yeşilbursa, 2011; Savas, 2012; Savaş, 2012; Payant, 2014; Kourieos, 2016; Tülüce and Çeçen, 2018) and their teaching practicum experience (Eröz-Tuğa, 2013; Susoy, 2015). Some studies focused on collaborative video viewing with supervisors (Akcan, 2010; Kaneko-Marques, 2015) and others on peer collaboration (Baecher, 2011). Studies taking place in in-service contexts looked at the impact of various feedback sources on reflection (Gün, 2011), using video for self-reflection

at an institutional level (Mercado and Baecher, 2014) and the role of mentors in facilitating video based reflection (Crichton, Edmett and Mann, 2019).

Kourieos (2016) conducted a qualitative case study examining the impact of video-based reflection and discussion on self-video analysis. The participants carried out microteaching sessions and were asked to complete a self-evaluation form once directly after teaching, and one more time after watching the microteaching videos and engaging in a classroom discussion. Findings underlined the impact of peer discussion and instructor guidance to get students to notice certain elements of their teaching, echoing the view in literature that preservice teachers need guidance for reflection (Kong, 2010; Lai and Calandra, 2010). Following the video viewing and classroom discussion, the participants had a higher awareness of their classroom talk, error correction practices and higher understanding of theoretical aspects of language teaching. Conducting a similar study in the Turkish context Karakaş and Yükselir (2021) corroborated Kourieos's (2016) findings and stated that video viewing coupled with group discussions allowed pre-service teachers to notice issues with their teaching they were unaware of and develop critical insights into their practice. Emphasizing this point, the researchers underlined noticing a discrepancy between the participants' pre-video observation forms and their post observation discussions, mainly that a large majority of the students reported having no issues with classroom language and communication only to notice their shortcomings after watching their own performances. A thematic analysis of the data showed that the pre-service teachers mainly reflected on three areas: classroom language/communication, time management and administration of activities.

Conducting studies with Turkish ELT students, Yesilbursa (2011a, 2011b) examined their reflective writing after carrying out video-recorded microteaching sessions as part of a methodology course. The analysis was done by implementing qualitative content and thematic analysis, looking at both the themes/content of reflections and the reflective levels. Applying the reflective rubric designed as part of her doctoral thesis, Yesilbursa (2008) found that a majority of the reflections were of descriptive nature, with positive/negative evaluations and neutral descriptions forming 76% of the segments. Looking at the content of the reflections the pre-service teachers mostly focused on themselves as teachers (67.45%) followed by a focus on student behaviour, tasks, and past

and future experiences (Yesilbursa, 2011b). Payant (2014) also investigated video reflection with microteachings, this time in the context of an MA TESOL program. Stating that the majority of video-based reflection studies have been conducted with native speakers of English, Payant (2014) examined the reflective writings of five non-native pre-service teachers. While findings were in line with the general literature with participants commenting that video provided objective evidence of classroom actions, Payant (2014) also noted that the pre-service teachers reflected on their linguistic abilities. Student teachers reflecting on their L2 use and any mistakes they made came up in other studies as well (Akcan, 2010; Eröz-Tuğa, 2013; Susoy, 2015). Participants in Akcan's (2010) study stated that video viewing especially helped them notice their grammatical and pronunciation mistakes. While the affordances of video viewing found in general education contexts are mostly transferable to English language teaching settings, Hüttner (2019) underlines the affordances that have specific relevance to language teachers as providing an opportunity to reflect on the use of classroom language and the trainee teachers` own language proficiency.

Also set in the Turkish context, Eröz-Tuğa (2013) investigated the use of video for reflection in the practicum context. The study design was based on Eröz-Tuğa noticing the anxiety and nervousness feelings of pre-service teachers during their assessed teaching practice and the fact that the trainees only received feedback on their performance during this assessment. Setting out to provide more feedback opportunities for the pre-service teachers and relieve their teaching related anxiety, the researcher added two unassessed video observations prior to the assessed teaching. Participants received feedback after both lessons during which they reviewed their teaching video with their university supervisor and peer partner. They were asked to write reflective reports at the end of the course, evaluating their teaching performance and the practicum process. Data collected in the form of recordings of feedback sessions and reflective reports were analysed using content analysis to uncover any shifts in comment depth or quality throughout time. Findings showed that the preservice teachers gained insight regarding their strengths and weaknesses, got better skilled at providing constructive criticism to their peers and noticed their classroom interactions, teacher talk, use of English and body language. Eröz-Tuğa (2013) noted the participants displayed a conscious effort for improvement and the more they watched and reflected on

videos of their teaching, the less dependent they became on their peer and supervisor for feedback. Susoy (2015) conducted a similar study in the Turkish ELT practicum context where the participants were asked to keep a reflective journal based on their video reflections. The content analysis showed that participants reflected on their L2 use and their emotional state at the time of teaching. In their 'end of practicum' evaluations, they noted feeling the need for more practical experience. The pre-service teachers also reported struggling with setting time aside for the reflective journals and feedback meetings as they were in the process of preparing for their teacher appointment examinations. This finding specifically, emphasizes the need for a form of reflection that can be integrated into teacher's practice without demanding too much of the scarce resource that is time.

Setting out to explore the use of video reflection at the institutional level, Mercado and Baecher (2014) conducted a large scale study with 247 EFL teachers in Peru, investigating their use of video-based self-observation for individual reflective practice. Set in an institution that has a well-established video self-observation component as part of their professional development program, the authors found that the teachers saw aspects of their teaching they were unaware of and managed to identify strengths as well as areas to work on.

Arguing that teachers 'tend to "react" rather than "reflect"!' (Gün, 2011, p. 126) if they are not explicitly taught how to reflect and not guided in engaging with reflection, Gün investigates how different sources of feedback contribute to in-service ELT teachers' reflections when they are part of a reflection training programme. Gün's (2011) project combines focused input sessions with video self-observation over the course of eight weeks. Aiming to examine the impact of different feedback sources, the study participants received feedback from their own video viewings, their learners, trainers, and colleagues. As a result, all four teachers stated that watching themselves on video was the most useful form of feedback. Despite finding the other forms of feedback useful, the participants found self-video viewing to have the greatest impact. This contradicts with the findings of Körkkö et al. (2019), as their participants noted getting greater benefits from supervisor feedback than watching their own videos. Although it should be noted that the participants in Körkkö et al.'s study were pre-service teachers, which might be a possible explanation for the difference in preferred feedback source. While Gün (2011) looked at the influence of various

feedback sources, Crichton et al. (2019) investigated the role of mentors in facilitating video based reflective practice in the Thai context. The research took place as a follow-up of an intensive in-service training course. Six experienced language teachers worked with approximately ten in-service teachers to mentor them in reflecting on their own teaching via videos. Over the ten-week process the mentors visited each teacher's school three times. In addition to these in person meetings, online support and feedback was provided through the video platform IRIS connect. At the end of the ten weeks, video club sessions were held where selected video clips were discussed collaboratively with other colleagues in the in-service teachers' institution. Findings showed that the teachers had little understanding of what reflection entailed and thus needed input on how to reflect. Some mentors felt that a lot scaffolding was required, especially with some in-service teachers displaying reliance on mentor input. This shows that guidance for reflection is not only necessary in pre-service contexts, but in in-service contexts as well. Mentors also noted struggling with getting teachers to record their lessons, watch and reflect on them within their busy schedule. However, the face-to-face elements of the project was seen as a motivating factor for teachers to engage with reflection. While teachers appreciated the focus on practical instead of theoretical aspects of teaching, some appeared to have had specifically prepared for the recorded lessons, thus reducing their authenticity. As noted in previous studies, the video served as evidence for mentor feedback discussions allowing the teachers to 'approach the evidence on a more equal footing' (Crichton, Edmett and Mann, 2019, p. 35).

Findings of video-based reflection studies conducted with English language teachers corroborate the more general findings in the video-based reflection literature. The common findings are teachers getting a chance to notice aspects of their teaching that were otherwise unnoticed (Gün, 2011; Karakaş and Yükselir, 2021) and increased ability in identifying strengths and weaknesses (Eröz-Tuğa, 2013; Mercado and Baecher, 2014). The importance of guidance for reflection is also echoed both in pre-service (Kourieos, 2016) and in in-service (Crichton, Edmett and Mann, 2019) contexts, showing that the need for guidance persists whether the form of reflection is written or video-based. A number of the studies examining pre-service teachers' reflections took place in micro-teaching settings (Yesilbursa, 2011b; Payant, 2014; Kourieos, 2016). While these displayed the affordances of

engaging in video-based reflection, it is undeniable that a real classroom setting highly differs from the micro-teaching context, thus further expanding the need for studies conducted in actual classroom settings. In addition to the more general affordances noted above, studies have also underlined the language teaching specific affordances of video-based reflection as teachers focusing on their own L2 use, their linguistic abilities, and more specifically any pronunciation or grammatical errors they made during the lessons (Akcan, 2010; Eröz-Tuğa, 2013; Payant, 2014; Susoy, 2015; Kourieos, 2016). These findings show how video-based reflection can have an impact on language teacher development specifically and strengthen the argument that more studies need to be conducted in this field (Baecher *et al.*, 2018).

2.5.7 Video Enhanced Observation (VEO) studies

A significant contribution to the video-based reflection field, particularly in language teaching, is the book Video Enhanced Observation for Language Teaching (Seedhouse, 2022) that brings together the most recent studies investigating the use of the VEO app for teacher development and reflection. Setting out to provide a model and guiding framework for the implementation of video-based teacher development, the studies report on VEO's use in various contexts including pre-service practicum, in-service professional development, and online communities in seven different countries. Studies situated in the pre-service context include examining how VEO can be used for observation and reflection in the pre-service teaching practicum context in different countries (Körkkö, Kyrö-Ämmälä and Turunen, 2022; Schwab and Oesterle, 2022; Tasdemir and Seedhouse, 2022) and taking a micro analytic approach to examining how VEO in pre-service practicum use facilitates the development of questioning practices (Bozbiyik, Sert and Bacanak, 2022). Studies carried out with in-service participants include a micro analytic focus on how VEO is used for peer feedback practices (Batlle and Seedhouse, 2022), examining VEO's integration into performance management observations (Hidson, 2022), using VEO for the reflection and improvement of English language teachers (Walsh, 2022), and a look into how VEO-based observations assisted with one teacher's improvement in error correction practices (Seedhouse and Whelan, 2022).

Building on their previous studies (Körkkö, Kyrö-Ämmälä and Turunen, 2016; Körkkö, Morales Rios and Kyrö-Ämmälä, 2019) Körkkö et al. (2022) report on the use of VEO with 20

pre-service primary school teachers during their five-week long teaching practicum. In this study the pre-service teachers were asked to identify areas of improvement and focus; and create their own individual tag sets (limited to two tags and possibly sub tags) for observation. The participants then recorded their lessons with their peers and followed this up with individual and peer reflection. This phase was followed by the student teachers selecting two critical instances from their teaching -one positive experience and one challenging one- for further reflection and sharing their lesson videos with their supervisor on the VEO portal. The final phases included a reflection discussion meeting with their supervisor and written reflection. The findings showed that customized tag sets helped preservice teachers' noticing and VEO recordings acted as a base for supervisory discussion. Despite the affordances of tags, one student commented on the difficulty of selecting appropriate tags and the discrepancy they found between the instances their peer observer tagged and what they expected to be tagged. Regarding the latter comment, the student teacher stated that their peer only tagged the self-evident moments whereas they were expecting the tags to further assist them with their exploration of teaching. The study underlined the importance of both peer and supervisor feedback, as the supervisor guidance scaffolded reflection and helped student teachers theorize their practice. Reiterating the importance of guidance for reflection, the authors conclude that the students would not have reached deeper levels of reflection without supervisor guidance.

Also looking at VEO's use in the practicum context, Schwab and Oesterle (2022) report on the app's use as an observational tool for pre-service English language teachers. Just like Körkkö et al. (2022), the student teachers were asked to create their own tag sets. This was to be followed by recording three of their lessons, reflecting on the recordings either individually or through peer discussion and subsequently recording an audio or video reflection. The researchers note that the participants did not complete the final task due to time restraints and also preferred to watch their video individually providing the same reasoning. The pre-service teachers in this study preferred to create one common tag set for all of them to use instead of individualised ones. The researchers report that in addition to the tags helping with reflection, the use of a common tag set helped the student teachers develop a shared language and form a community of practice. In line with Körkkö et al.'s (2022) findings, Schwab and Oesterle (2022) emphasize that whilst engaging with video-

based reflection, the guidance of a supervisor or lecturer could be beneficial in assisting student teachers to notice significant aspects of the video and facilitate deeper reflection. Reflecting on the incomplete tasks of their project, the authors also underline the need to systematically integrate video-based reflection in teacher education programmes in order to provide pre-service teachers with the necessary time and space for reflection.

Bozbiyik et al. (2022) investigated a pre-service English language teacher's development of questioning practices through using VEO-integrated IMDAT (Sert, 2015) in a practicum programme in Turkey. IMDAT is a model for developing L2 classroom interactional competence (CIC), which integrates a focus on CIC with dialogic reflection within the context of the pre-service practicum (Sert, 2015). Using conversation analysis to examine relevant classroom instances, the authors found that through the implementation of video-based dialogic reflection the student teacher adopted different questioning practices to increase learner input and increased her awareness regarding interactional practices. Also focusing on development of teaching practices, Seedhouse and Whelan (2022), report on how an English language teacher improved her correction practices through the use of a customised tag set within the context of a teacher training course.

Using multimodal conversation analysis, Batlle and Seedhouse (2022) examine how Spanish language teachers developed their peer feedback practices through the use of VEO. The researchers found that VEO became central to the peer feedback interaction, coming into play at points of topic change and focus on notes. The integration of VEO into the feedback interaction provided both parties with direct access to the observation information, allowing for a more collaborative discussion. Looking at how VEO-based observation was integrated into one school's performance management structure, Hidson (2022) also underlined how the use of VEO for observation and feedback shifted the traditional post-observation meeting structure by turning it into a collaborative endeavour.

Taking the interaction online, Walsh (2022) examined how VEO was used for reflection and improvement of practice with in-service English language teachers. The study combines Walsh's self-evaluation of teacher talk (SETT) (2006) framework with VEO whereby a SETTVEO tag set was created based on the framework. The participants were 24 English language teachers working in universities in four different countries. The teachers were asked to make four short video recordings (approximately 10 minutes) of their teaching,

review and tag them retrospectively on the VEO portal and make them available to other participants for further dialogue and discussion. The findings showed the teachers developed their classroom interactional competence, which was evident through their use of appropriate metalanguage. They also reported on the affordances of video in facilitating them to see changes in their practice and raise their self-awareness regarding their teaching.

2.6 Concluding Evaluation of Reflection Research

Despite the seemingly widespread acknowledgement of the value of reflection and the large body of research on it, reflection research has also been subjected to criticism. Summarizing the issues in reflection literature, Beauchamp (2015) outlines some of the long standing criticisms as the problem of no common definition, shifting terminology, the different epistemological approaches and the gap between the theory and practice of reflection. In addition to these persistent criticisms, there are also those that Beauchamp (2015, p. 127) titles 'emerging criticisms'. One of these is stated as 'the lack of real reflection' (Beauchamp, 2015, p. 127), whereby the field is criticized to have more talk of reflection than actual practice. These critiques draw attention to the lack of integration of reflection into teacher education programs despite its power and value being widely researched for decades. Another aspect of this critique lies in the type of research undertaken when researching reflective practice. In the words of Korthagen and Wubbels (2001, p. 89, quoted in Rich and Hannafin, 2009) reflection research relies 'heavily on comments made by student teachers during course evaluations, as well as on self-reports, general observations, and isolated anecdotes'. In the same vein, Mann and Walsh (2013) have also criticized the state of reflective practice in applied linguistics and TESOL arguing that reflection 'is not supported by detailed, systematic and data-led description of either its nature or value' (p. 292). Korthagen and Wubbels (1995) have also underlined the lack of established connection between reflective skills and technical teaching skills stating that in their opinion 'it is worthwhile to pursue reflection in teaching only to the extent that it contributes to better teaching.' (p. 51). This gap in reflection research is reiterated two decades later regarding video based reflection as Gaudin and Chaliès (2015) note 'little empirical evidence has been presented on how video use benefits actual classroom practice' (p. 54). Criticizing the research methods, the authors add that in the few studies that have drawn links between

video reflection and classroom practice, this relationship has been inferred 'from "indirect" evidence (e.g., questionnaires, written commentaries) and not from "direct" evidence, that is, the analysis of their actual classroom practice (e.g., self-confrontation interviews)' (p. 54).

In their literature review of video-based reflection studies Tripp and Rich (2012) provide a helpful summary of what is already known and the gaps in the research. The authors state that the power of video for reflection, the affordance video provides for teachers to see their practice and video supporting recollection of teaching events are well established. On the other hand, 'there is a need to better understand how and in what ways video has been used to reflect on one's own teaching.' (Tripp and Rich, 2012, p. 678). Also emphasizing the need for clarity and detail in video reflection studies, Baecher et al. (2018) note that only 33% of the studies they examined reported the length and number of videos used for reflection. Joining Mann and Walsh (2017) in calling for more detailed accounts of how reflection gets done, Baecher et al. (2018) state that: 'It is not enough to simply report that video impacts reflection. Without greater transparency demanded of these studies, we will continue to have a clouded understanding of this seemingly powerful tool.' (p. 209).

To conclude, despite the extensive research on reflection there is a need for more data-led accounts (Mann and Walsh, 2013), providing detail and transparency on the processes of facilitating and promoting reflection (Tripp and Rich, 2012; Baecher et al., 2018). There is also a need for more studies looking into the possible links between reflection and teaching practices in order to uncover the relationship (Gaudin and Chaliès, 2015; Tülüce and Çeçen, 2016; Baecher et al., 2018). Last but not least, as this literature review has outlined a majority of the reflection and video-based reflection studies have been conducted in the USA with mathematics and science teachers, revealing a gap in reflection research with nonnative teachers (Payant, 2014) and in the field of English language teaching in general (Hüttner, 2019). To summarize using Baecher et al.'s (2018) words 'video analysis is in high use, is extensively researched, and widely promoted, yet its potential to deepen teacher self-awareness and improve pedagogy is just unfolding.' (p. 210). Based on the research gaps outlined in this literature review, this study aims to contribute to multiple aspects of the field of reflective practice. First and foremost, through examining the use of VEO the study intends to move beyond general accounts of video-based reflection and provide a detailed understanding of how a video-annotation tool can be used for reflection (Rich and

Hannafin, 2009; Baecher *et al.*, 2018). Looking at the VEO tool specifically will provide an understanding of how the VEO specific features (live tagging, mobility, tags for reviewing) contribute to or take away from the reflective practice experience. The study also sets out to explore any links between reflection and teaching practices, contributing to an underresearched area of the reflective practice literature (Korthagen and Wubbels, 1995; Gaudin and Chaliès, 2015). In addition to these practical and theoretical contributions, the study context (English language teaching in Turkey) also intends to fill certain gaps in the research. Focusing on English language teachers adds to the video-based reflective practice in language teaching literature that is underdeveloped compared to the fields of mathematics and science (Hüttner, 2019). Examining the language teaching context intends to further our understanding of the field specific affordances video-based reflection can provide. Furthermore, the focus on the Turkish context sets out not only to contribute to the reflective practice research in Turkey, but also to provide practical insights into how video-based reflection can be implemented in similar contexts where it is not integrated into the wider teacher education system.

Chapter 3 Methodology

3.1 Purpose of The Study and Research Questions

Defined as the basis of professional competence (Larrivee, 2011), reflective practice is seen as a vital skill for practitioners to learn from their experiences and develop professionally (Loughran, 2002). Seen as a way to bridge theory and practice (Schön, 1983), reflection has become increasingly integrated into teacher education programs (Loughran, 2002). Following its adoption in general education, reflective practice has gained popularity in the field of English language teaching from the 1990s (Farrell, 2018).

While keeping journals and diaries for reflection has been a popular (Orland-Barak, 2005), and possibly over-used (O'Connell and Dyment, 2011), method; with the developments in technology video has been increasingly used for the promotion of reflective practices (Hüttner, 2019). Despite its long history, widespread usage and the advancements of tools used to implement it, the field of reflective practice still needs further research. The shortcomings of the current literature that guide this research are the over-reliance on written and individual forms of reflection (Mann and Walsh, 2013), the paucity of studies looking into the impact of reflection on teaching practices in a data-led manner (Gaudin and Chaliès, 2015) and the relatively low number of studies investigating video based reflection both in the field of English language teaching (Hüttner, 2019) and in the Turkish context (Eğmir, 2019).

Grounded in this, the purpose of this study is to investigate how pre-service and in-service teachers use a video tagging application (VEO) for reflection and professional development and understand the advantages and disadvantages of using such a tool for the reflective process. The over-arching research question of this study is:

'Does VEO act as a catalyst for dialogic reflection and deep understanding of pedagogy and professional practice? If so, how?'

This question is broken down into three sub-questions in order to facilitate its understanding:

1. How do teachers use VEO for their reflective practices?

- 2. To what extent does VEO support teachers' reflective practices and professional development?
- 3. What are the advantages and disadvantages of using VEO?

The table below provides a brief overview of the reasoning behind the research questions as well as the data sources and analysis methods that will be used to answer them.

Table 3.1 Overview of data sources and analysis								
Research	Why?	Data Source	Analysis	Cases				
Questions								
1. How do teachers use VEO for their reflective practices?	To further our understanding of how exactly teachers choose to integrate videobased technology into their teaching practices for the goal of facilitating reflective practice	Post VEO-use interviews with teachers and trainers/supervisors VEO app use data Pre-service teachers' reflective essays Audio recordings of feedback meetings VEO tag use data	Thematic analysis Descriptive summary Triangulation	Themes emerging from all participants' interviews and reflections are reported in Chapter 5 Pre-service teachers, Lale and Selim, are reported as individual case analyses in Chapter 5				
2. To what extent does VEO support teachers' reflective practices and	To investigate the impact of VEO use on reflective practice and professional development; and	Pre-service teachers' written reflections Audio recordings of feedback meetings VEO tag use data	Qualitative content analysis to examine quality of reflection using the Reflective Framework created within this study	Pre-service teachers, Lale and Selim, are reported as individual case				

professional	to examine the		Thematic analysis to	analyses in
development?	relationship		examine the content	Chapter 5
	between the two.		of reflections	Their written
				reflections are
		VEO-recorded lessons	Triangulation	analysed in Chapter 6
3. What are	To specify the	Interviews with in-		Themes
the	potential	service teachers		emerging from
advantages	affordances and	and teacher		all
and	challenges of using	trainers	Thematic analysis	participants'
disadvantages	video-based	B		interviews and
of using VEO?	technology for	Pre-service teachers' written reflections		reflections are
	reflection			reported in
				Chapter 4

3.2 Philosophical Assumptions

Creswell (2014) outlines the three components of a research approach as the philosophical assumptions the researcher brings to the study, the research design and the specific methods implemented to carry out the design. Identifying and making clear one's philosophical assumptions is a crucial element of research as 'these beliefs shape how the qualitative researcher sees the world and acts in it' (Denzin and Lincoln, 2018, p. 56). Creswell uses the terminology philosophical worldview to mean the 'general philosophical orientation about the world and the nature of research that a researcher brings to a study' (2014, p. 35). This encompasses the notions of ontology and epistemology which refer to 'the nature of our beliefs about reality (ontology) and about knowledge (epistemology)' (Richards, 2003, p. 33).

This study is based on a constructivist worldview also referred to as interpretivism (Merriam and Tisdell, 2016) or social constructivism (Creswell and Poth, 2018). This position is grounded in the assumption that reality is socially constructed and that 'there is no single, observable reality' (Merriam and Tisdell, 2016, p. 9). Within this worldview, emphasis is

placed on individual's experiences and the subjective meanings they develop from them (Creswell and Poth, 2018). Denzin and Lincoln (2018) summarise this position as below:

'The constructivist paradigm assumes a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent co-create understandings), and a naturalistic (in the natural world) set of methodological procedures.' (p. 57)

This position is suitable for this study first and foremost as it is conducted in the participants' natural setting, setting out to examine how teachers incorporate VEO into their practices for reflection. Secondly, for investigating reflection pre-service teachers' interpretations of their own teaching practice and lesson videos are examined through the reflective essays. The analysis is conducted inductively, thus not imposing set standards of what reflection should include and how it should be engaged with. The examination of lesson video recordings, video-based feedback meetings and individual written reflections allows the researcher to explore how pre-service teachers' interpretations and realities are shaped through the use of video and reflective dialogue.

When discussing improvement in practice, both the areas of improvement and the ways pre-service teachers can improve is based on the pre-service teachers' and the supervisor's perception. Thus, improvements in teaching practices are first examined through the lens of the participants and then located in the wider teaching practice literature. The researcher refrains from making any judgements in relation to what good practice should be, rather the focus is kept on whether or not participants are able to apply what they intended to and reflected on.

Additionally, interview data collected to inform of participants' use of VEO and the experienced advantages and disadvantages of it, offers a view into how they perceived the experience and how they preferred to engage in reflection.

3.3 The Role of the Researcher

The researcher is central to qualitative inquiry and in the words of Creswell and Poth (2018):

'Researchers recognize that their own background shapes their interpretation, and they "position themselves" in the research to acknowledge how their interpretation flows from their own personal, cultural, and historical experiences.' (p. 77)

This positioning is necessary as Merriam and Tisdell (2016) note that in qualitative research 'the researcher is the primary instrument for data collection and analysis' (p. 16). McKinley (2020) links this positioning to the notion of reflexivity which he defines as 'the acknowledgement of the researcher's own subjectivity' (p. 4). Positioning myself, as the researcher, within the context of this research I acknowledge that I have an insider's perspective (McKinley, 2020) in relation to the Turkish participants due to our shared cultural and national identity. My position in relation to the UK participants of the study is that of an outsider as my personal experiences in the UK are limited to that of a postgraduate student in the higher educational context.

To further expand on my position identities and clarify my relationship with the participants, in this section I provide a brief summary of my educational and professional background. I studied Translation and Interpretation at a Turkish university for my undergraduate education; thus I do not come from a language education background and do not have personal experience of the language teacher education programs in Turkey. Although I did not complete the four-year programme, I did take a yearlong teacher certification programme which gave me a glimpse of the system. Similar to the practicum in this study, I had to teach two lessons to complete the certification programme. However, my school supervisor felt it was okay for me to pass without doing the actual teaching which I naively took as a favour, thus I completed the programme without carrying out any classroom teaching. This position allowed me to be an insider culture-wise and have some information regarding the teacher education systems in Turkey. However not sharing the same educational background, I had minimal preconceived biases or judgements that could have impacted my interpretation.

I started teaching English with no prior experience and taught in a university pre-sessional programme for three years in Turkey. After struggling immensely as a novice teacher for the first year, I took a CELTA course which formed the basis of my practical teaching knowledge. As an inexperienced teacher, I was in dire need of guidance, however the professional development attempts within the organization remained performative with peers coming in

for observation and writing glowing feedback reports simply to show that the professional development activities were taking place. These are the experiences that formed my motivation and interest to undertake this study looking into teacher reflection, professional development and how these can be facilitated through video-based technology.

The influence of my positioning on the data collection processes was minimal as the majority of the data for this study was obtained from the VEO Europa project. Within the project, the VEO based lesson observations and feedback meetings were all carried out by the participants within their natural settings with zero researcher influence. In both settings the classroom observations and feedback meetings were already taking place, VEO was added into this existing structure. The interviews were conducted by the VEO Europa project research assistant and myself, this will be further expanded on in the relevant section.

3.4 Research Design

3.4.1 Case Study Research

Case study research seems to have become one of the preferred approaches to conduct research, especially in educational contexts (Tight, 2010). The question of what is included in and can be defined as case study research has generated various answers according to different scholars. There seems to be a confusion regarding a definition especially due to the term 'case study' being used as a generic term for teaching cases in fields such as business and medicine (Tight, 2010).

As one of prominent figures in the field, Yin describes the preferable conditions to conduct case study research as the following:

'Doing case study research would be the preferred method, compared to the others, in situations when (1) the main research questions are 'how' or 'why' questions; (2) the researcher has little or no control over behavioural events; and (3) the focus of the study is a contemporary (as opposed to entirely historical) phenomenon.' (2014, p. 2)

Providing a definition that encapsulates all relevant aspects of doing case study research Creswell (2007) states that:

'Case study research is a qualitative approach in which the investigator explores a bounded system (a *case*) or multiple bounded systems (*cases*) over time, through detailed, in-depth data collection involving *multiple sources of information* (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case *description* and case-based themes' (2007, p. 73, emphasis in original)

Also using the terminology 'bounded system' Merriam (2009) defines case study as 'an indepth description and analysis of a bounded system'. While Stake's (2006) definition draws focus on what Yin (2014) worded as 'having no control over behavioural events' and emphasizes the importance of what is being studied stating 'qualitative case study was developed to study the experience of real cases operating in real situations' (p. 3).

Drawing upon the defining characteristics of case study research emphasized in these definitions, the methodology is appropriate for this study as one of the main questions trying to be answered is how teachers use VEO for their professional development. This question aims to investigate how teachers choose to incorporate VEO into their practices, thus observe how it can be used in their natural setting. It is also preferred as the subject being studied is a contemporary event, looking at teachers operate in their own real-life contexts with no intervention from the researcher. The data has been collected from multiple sources in order to accomplish the in-depth analysis mentioned by Cresswell (2007) and Merriam (2009). The sources include classroom recordings using VEO, the VEO usage reports produced by the app which consist of the tag choice and frequency used in a particular recording, interviews with teachers and teacher trainers as well as reflective documents.

3.4.2 Case Study Design

Yin (2018, p. 67) emphasizes the significance of five elements of the case study research design as:

- '1. A case study's questions;
- 2. Its propositions, if any;
- 3. Its case(s);
- 4. The logic linking the data to the propositions; and
- 5. The criteria for interpreting the findings.'

One of the most important steps of designing a case study research is deciding on the units of analysis. Yin (2014, p. 31) describes this as a two-step process consisting of 'defining the case' and 'bounding the case'. Both of these steps are taken to clarify what exactly is being studied in the research. The former consists of deciding what to label as a 'case', this may be a single individual, a small group, or even specific events. After the decision is made regarding what qualifies as a case, the next step is drawing its boundaries; in other words what is included in the unit analysis and what is left outside.

In line with Yin (2014), Creswell (2007) also emphasized the importance of a bounded system using it synonymously as the concept of 'case' in his definition. Drawing from the literature on case study as a research methodology Merriam (2009) argues that the most defining characteristic of a case study is the choice of the 'case', in other words what the researcher defines as the bounded system for their study. She summarizes this point of view stating that a case study is characterized by the unit of analysis rather than the topic of investigation.

Regarding the design of a case study Yin (2014) points out two factors to consider: the decision between a single-case and multiple-case design and choosing to adopt a holistic or embedded analysis. The second factor pertains to the levels of analysis; where a holistic design is chosen the case is analysed as a whole in other words the big picture is the main focus, whereas the embedded design incorporates multiple units of analysis within the case.

Stake (2006) also emphasizes the importance of focusing on both the single cases separately and maintaining a holistic point of view, in line with Yin's (2014) notion of embeddedness. Stake (2006) underlines the importance of the single case within its position in a multiple case study research, stating that the individual cases require focus as they have something in common with each other. He summarizes this point of view as 'the cases in the collection are somehow categorically bound together' (p. 6). This study defines the individual (preservice teachers/in-service teachers) as the cases and the bounded system within which the cases exist is the use of VEO for reflection and professional development.

Having established the units of analysis and bounded system, another categorization of case study design is made by Stake (2006) regarding the purpose of research. He mentions two types of case studies as instrumental and intrinsic. Intrinsic meaning that the main focus and

interest lies within the case itself while instrumental is explained as research where the purpose is going beyond the case. Within this dichotomy Stake (2006) emphasizes a higher possibility of multiple case studies being instrumental due to the strong interest in the overarching phenomena he calls quintain.

In attempt to provide vocabulary to represent the collective target in multiple case research Stake (2006) uses the word 'quintain'. He describes this as 'an object or phenomenon or condition to be studied – a target, but not a bull's eye.' (p. 6). He further explains this term as 'quintains are functions or conditions of which we might seek examples to study'. (p. 6).

Thus, taking into account all of these categorizations and descriptors the 'quintain' of this study is the use of VEO as a catalyst for professional development and reflection. Within this general phenomena that has been set out to study, the research has been designed as an instrumental multiple case study with individual teachers as the cases.

3.4.3 Issues with case study research and other possible research designs

As with any research design, there are aspects of case study research that are considered to be weaknesses or limitations (Duff, 2008). Often contrasted with larger scale studies, perhaps one of the biggest concerns is relating to the notion of generalizability (Duff, 2008; Yin, 2018). Yin (2018) addresses this issue by stating that the goal of case study research is not to provide generalizations; cases should not be taken as samples of a larger population rather they should be seen as an 'opportunity to shed empirical light on some theoretical concepts or principles' (p. 73). Duff (2008) states that the term generalizability is often substituted with transferability or comparability in qualitative research. This concept 'assigns the responsibility to readers to determine whether there is a congruence, fit, or connection between one study context, in all its richness, and their own context, rather than have the original researchers make that assumption for them' (p. 51).

One other challenge in conducting case study research is the concept of rigour (Richards, 2003). Richards (2003) cautions that inexperienced researchers might assume detailed description is sufficient to conduct a case study, in order not to fall into this pitfall this study provides great transparency regarding the analytic processes and uses thematic analysis to increase analytical strengths. This is also linked to the criticism of objectivity versus subjectivity (Duff, 2008) as the researcher has a central role in the qualitative case study

design. However, Duff (2008) notes that this criticism against researcher subjectivity can be brought against any form of qualitative research, and it is stated that this issue can be mitigated through the transparent reflexivity of the researcher (McKinley, 2020).

With any research there are various possible research designs and methods that can be implemented. Yin (2009) outlines the three important conditions to take into account when choosing a research method as '(a) the type of research question posed, (b) the extent of control an investigator has over actual behavioral events, and (c) the degree of focus on contemporary as opposed to historical events' (p. 37). Working through these conditions in reverse order: the current research is focused on contemporary events, researcher control over participant behaviour was minimal however the study could have been designed in a way that required more control and the research questions are formulated as how, to what extent and what questions. Based on these, this study could have been designed as a survey, experiment or could have also employed other qualitative methodologies (Yin, 2009). An experimental design requires researcher control over behavioural events (Yin, 2009), indeed numerous studies looking into teacher reflection and professional development have been carried out using this methodology (see Bain et al., 1999; Seidel et al., 2011). This form of research does allow to answer how and why questions, however the primary reason for not choosing an experimental design for this study was the motivation to discover how teachers integrated VEO into their existing settings. This angle of the research required minimal researcher intervention to allow for data collection from a natural setting. Another reason driving the choice of qualitative methods over quantitative ones is the level of detail achieved by the respective methods. Teacher's reflections can be explored using a quantitative or mixed-methods design (see Lai and Calandra, 2010; Calandra et al., 2018). On the other hand the field of reflection has been criticized for the lack of reports examining exactly how reflection gets done (Mann and Walsh, 2013) – answering which would call for a more detailed and up-close analysis, the kind that is afforded by qualitative design.

Merriam and Tisdell (2016) list the characteristics of basic qualitative design to include focus on meaning, inductive and comparative data analysis, and rich description for findings presented as themes. Expanding on various qualitative research designs the researchers state that all types of qualitative research share these base characteristics, but specific designs add their own dimension. The dimension added with the qualitative case study

design is affording an 'in-depth analysis of a bounded system' (Merriam and Tisdell, 2016, p. 42). Thus, the case study design allows this research to examine how teachers reflect in terms of the specific processes they engage in, the levels of their reflection and the content focus, as well as the impact of this on their teaching practices all within the bounded system of using video-based observation through VEO.

3.5 Participants and Research Context

The data of this study is obtained from the VEO Europa project which is a large-scale Erasmus+ project incorporating six partners from five different countries (UK, Finland, Germany, Turkey and Bulgaria) aiming to investigate the use of VEO for professional development in a number of different contexts. A data sharing agreement has been signed between both parties that allows the researcher to use the project data for this research. For the purpose of this study data from the Turkey and UK partners will be used. These two contexts combined provide both pre- and in-service teacher data. In line with the research questions, the aim of this study is to investigate how VEO is used for reflection and professional development. Thus, data that was collected in the wider VEO Europa project that does not align with this goal, such as teachers using VEO to record student presentations, was not included in this study. Additionally, examining the impact of VEO's use on reflection and professional development required VEO to be used more than once. This was most consistently done in the Turkish pre-service context, which is why the two case studies have been selected from this context. The wider data set includes teacher educators in the UK context and in-service teachers in the UK context.

3.5.1 Turkish pre-service context

The pre-service context data was obtained from the Turkey partner of the VEO Europa project. The project partner, at the time, was a lecturer at a Turkish university within the department of English Language Teaching and the participants for the project were his senior year students. The data collection took place during the final year practicum course of the English Language Teaching program.

3.5.2 Practicum courses in English Language Teaching (ELT) programs in Turkey

Undergraduate ELT programs in Turkey are four years long and consist of eight semesters

(Celen and Akcan, 2017). The students take various modules focusing on the English

language, language teaching methods and pedagogy. The final year of the program has two practicum courses: School Experience (7th semester) and Teaching Practice (8th semester) (Sert, 2010). During the School Experience course, pre-service teachers observe lessons of an experienced teacher in their assigned school for more than twelve weeks. They are then expected to write observation reports for the course assessment. For the Teaching Practice course pre-service teachers get the opportunity to teach several classes. At least one of these lessons is observed by their practicum supervisor and they receive a grade based on their lesson planning and teaching performance (Sert, 2010).

At the start of senior year, the whole practicum is divided into groups and assigned to a lecturer within the department to be their practicum supervisor. Up until 2018, the number of students assigned to a supervisor was capped at fifteen according to the guidelines provided by the Ministry of National Education, new guidelines introduced in 2018 lowered this number to eight (MEB, 1998, 2018). The students are then put into pairs with their chosen peer to be peer buddies throughout the final year. The practicum groups are assigned to a school where they would be carrying out their observations and teaching throughout the year. Within the school each student is paired with a cooperating teacher whose classes they will be observing.

The structure outlined here is the base structure for ELT courses in Turkey; specifics such as the number of lessons students teach, the number of lessons observed by the supervisor, the structure of observations and course requirements vary in different universities.

3.5.3 Integrating VEO into the ELT practicum and the IMDAT framework

The VEO Europa project officially ran from September 2015 to September 2017, and the main data collection was carried out in the second semester of the academic year 2016-2017. The participants were senior year ELT students assigned to the VEO Europa Turkey partner for the practicum. Due to the large course cohort, the practicum group consisted of 20 students in total: 13 females and 7 males, all in the age group 20-24. The students were partnered up with a peer of their choice to collaborate with for the practicum activities, creating 10 pairs. The collaborating school for this group of students was a secondary school in Ankara, the capital of Turkey. The classes they taught consisted of an average of 20 students each and the required number of English lessons per week was three-four hours.

The ELT program in this study also had a focus on classroom interactional competence integrated through the IMDAT framework (Sert, 2015, 2019, 2021). The IMDAT acronym stands for the individual phases of the model which are (1) introducing classroom interactional competence, (2) micro-teaching, (3) dialogic reflection, (4) actual teaching, and (5) teacher collaboration and critical reflection (Sert, 2015). Through employing this model, the pre-service teachers were introduced to the concept of L2 classroom interactional competence by looking at real classroom data and conversation analysis transcripts. This introduction took place before the practicum teaching stage of the programme, thus giving the students some experience in looking at classroom videos and examining interactional talk.

For the integration of VEO into the IMDAT model, the Turkish VEO Europa researchers conducted a workshop at the beginning of the semester to introduce students to the app. The workshop focused on the importance and implementation of peer observation and reflection as well as the use of the VEO app. After the workshop, the supervisor gave the students the option of using VEO for their practicum observations, emphasizing that the choice would not affect their grade in any way, and they could opt for regular classroom observations instead. The whole group chose to use VEO for the process. At the time of data collection, the VEO app was only available on IOS platforms, due to this restriction and the fact that every participant, quite understandably, did not own an iPad tablet, the students were able to borrow iPads from the university library. This was also presented as an option for them to do a test run with VEO prior to the actual lesson observations.

The students then arranged their teaching dates and times, each student's first lesson was observed by their university supervisor and subsequently followed by a post-observation feedback session. In line with the IMDAT model, the feedback dialogue included a focus on the interactional elements of the lessons (Sert, 2019). The student's second lesson was observed by their peer which was also followed by a feedback session with their peer partner which forms the last step of the IMDAT model (Sert, ibid.). The students were also asked to watch the tagged VEO recordings of their lessons and write reflective essays on their teaching experience. However, these essays were not mandatory and did not have an

impact on their assessment. A summary of the VEO integrated practicum structure can be seen in FiguresFigure 3.1Figure 3.2 below:

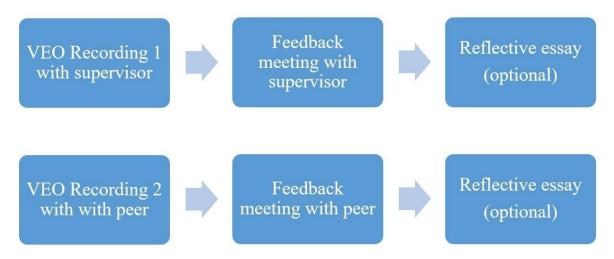


Figure 3.1 Practicum structure with VEO integration

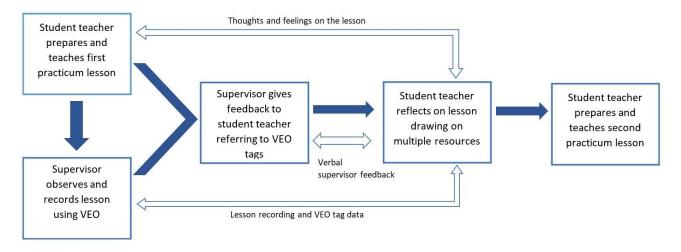


Figure 3.2 Detailed practicum structure with VEO integration

3.5.4 VEO tag sets used in the Turkish pre-service context

The main tag set used with the pre-service teachers was the Language Learning and Teaching tag set. This tag set was developed within the VEO Europa project by a group of language education researchers to be used in language teaching classrooms. It was designed as a holistic language teaching tag set and incorporated both teacher-focused and student-focused tags, as well as tags to capture the general features of the lesson.

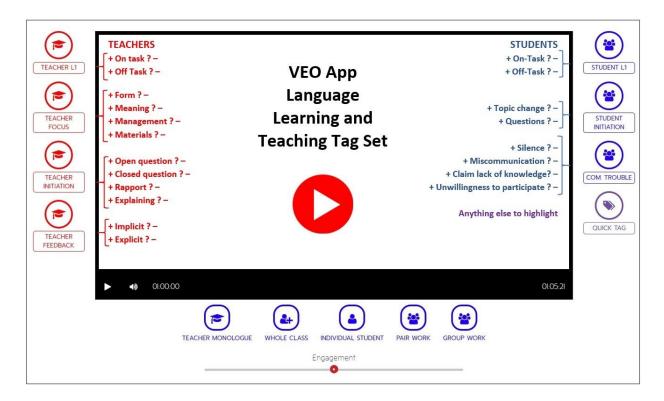


Figure 3.3 Language Learning and Teaching Tag Set

Having used this tag set in the VEO Europa pilot study, the Turkey partner created two new tag sets with a narrowed down focus: one focusing on the teacher (L2 Teacher Tag Set) and the other focusing on the learner (L2 Learner Tag Set). The L2 Learner Tag Set is not included here as it was not used by the selected cases in this study.

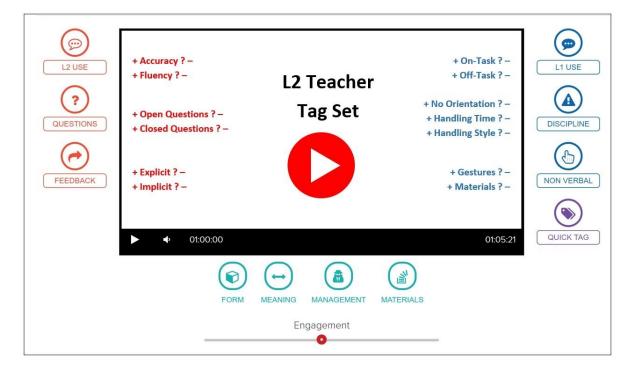


Figure 3.4 L2 Teacher Tag Set

While the number of tags does not seem drastically lower than the main Language Learning and Teaching tag set, this change was seen as necessary by the supervisor. Apart from the number, some tags were retained in the new tag set, such as the focus on questions and feedback. The two newly added tags were 'L2 use' of the teacher and 'discipline'. Although a new tag set was created for this cohort, it was not set as the mandatory tag set. The participants were given an option to choose between the more general Language Learning and Teaching tag set and the narrowed-down L2 Teacher or L2 Learner tag set.

3.5.5 Case selection

Creswell and Poth (2018) note case selection as one of the challenges of case study research. When the design is a multiple case study the authors caution that 'the more cases an individual studies, the less the depth in any single case can be' (Creswell and Poth, 2018, p. 209). Keeping this in mind, two pre-service teachers from the Turkish context were selected for the in-depth case analysis. The first step of the case selection process was to examine the data collected for each individual. Although all of the Turkish cohort participants engaged in the same process, the data collected from each individual was not the same with some of pre-service teachers not sending in their reflective essays. Thus, the initial criteria was to have access to the complete data collection for the selected cases (Yin, 2018). This included VEO lesson recordings, VEO tag use data, lesson plans, reflective essays, and post-observation feedback meeting recordings.

Yin (2009) identifies five types of cases as the critical, the extreme or unique, the representative or typical, the revelatory and the longitudinal case. While Richards (2003) lists typical, extreme (deviant) and maximum variation as case sampling strategies. Amongst these divisions Creswell and Poth (2018) state their preference lies with 'selecting cases that show different perspectives on the problem, process, or event' (p. 205). This form of sampling is called purposeful maximal sampling (Creswell and Poth, 2018). The case selection in this study follows this method. The first case Lale was selected as the typical case as her reflective essay and post-observation meeting were heavily focused on the topics of classroom management and discipline and her reflective writing appeared to be mostly descriptive. With these initial observations, Lale appeared to be an example of the typical pre-service teacher that produces surface level reflections, focused on classroom management (Hatton and Smith, 1995; Watts and Lawson, 2009; Cohen-Sayag and Fischl,

2012). The second case Selim was selected as his reflective style and focus contrasted with Lale's, appearing to be more than descriptive, and focusing on feedback strategies. The selection of these two cases aimed to show the range of how pre-service teachers engage in VEO-based reflection.

3.5.6 UK context participants

The UK data collection of the VEO Europa project was not as streamlined as the Turkey data collection. Several schools were contacted, and teachers were asked to use VEO in their own contexts. As previously mentioned only data from the teachers that used VEO for the purposes of reflection and professional development were included in this study. This resulted in the data set below:

Table	Table 3.2 UK context participants								
Data set	Pseudonym	Role/position	School	Role in VEO experience	Context of VEO use	Data source			
UK	Sam	Deputy head teacher	High school	Observer	CPD	Interview			
UK	Matt	Head of science	High school	Observee	CPD	Interview			
UK	James	Geography teacher	High school	Observee	CPD	Interview			
UK	Kelly	ESOL tutor	College	Observee	DELTA course	Interview			
UK	Iris	Teaching assistant in MA Applied Linguistics	University	Observer	Learning to teach module in MA programme	Interview			
UK	Tom	Lecturer in Secondary PGCE Science	University	Observer	Teacher training in PGCE course	Interview			

The participants from the high school context, Sam, Matt and James, integrated VEO into their existing lesson observation for professional development system. Similar to the Turkish pre-service teachers, video observation was offered as an alternative to the traditional lesson observations. In this school context two of the teachers accepted the use of VEO for their lesson observations. The intention was to use VEO three times throughout the year for the purposes of professional development. At the time of data collection, both Matt and James had one lesson each observed using VEO. The process of VEO use was also similar to

the Turkish cohort with the observer carrying out the lesson observation with VEO which was followed with a post-observation meeting.

Kelly was an ESOL tutor teaching English to adults, and she used VEO as part of her DELTA course. Her VEO use differs from the previous contexts as it was self-initiated as opposed to an intervention brought into the organization. Kelly collaborated with the VEO Europa UK research assistant to create a custom tag set and get her lessons recorded with VEO. Her experience and professional development from using VEO has been published as a case study in the VEO book (Seedhouse and Whelan, 2022), thus, in this study only the interview data was used to enrich the data set.

Finally, the last two UK participants included in the study are Iris and Tom. These participants worked in a higher education setting and used VEO as observers and teacher trainers, thus not for their own reflection and professional development. Despite this, their interviews were included in the larger data set in order to add the observer's perspective to the use, advantages and disadvantages of VEO.

3.6 Data Collection and Analysis

The major strength of the case study approach is that it can provide a convincing and accurate account of the research subject, drawing data from multiple sources (Yin, 2018). With the multiple sources of evidence available, the researchers have had the opportunity

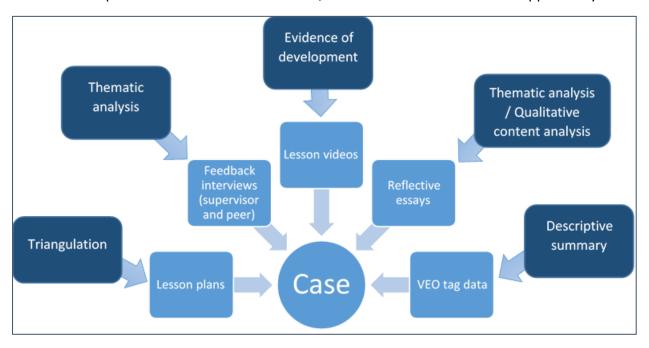


Figure 3.5 Data collection and analysis

to use triangulation, thus strengthen the validity of the case (Stake, 1995; Yin, 2018). In line with this, Figure 3.5 displays all the data collected for the individual cases from the Turkish data set.

3.6.1 Reflective essays

Reflective essay data formed a major section of data analysed for the individual cases. The essays were written in English and sent to the university supervisor who then provided me access to them as part of our data sharing agreement. Any identification of the trainee teacher or their learners was anonymised prior to data analysis. The reflective essay analysis was twofold intending to examine both the focus of reflection and the level of reflection. For the focus of reflection, Braun and Clarke's (2006a) thematic analysis was employed. The researchers outline the following steps to carry out thematic analysis: familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining, and naming themes and producing the report. The analysis was undertaken using qualitative analysis software (nVivo) which facilitated the collation of codes and reviewing each theme within itself. The analysis for the level of reflection adopted steps from qualitative content analysis (Schreier, 2012) including segmenting the data and building a data-driven coding frame. This process resulted in the creation of a Reflective Framework, drawing from both the literature and the initial data analysis. This is further expanded on in the analysing reflective writing section below.

3.6.2 Audio recording of feedback meetings

The post-observation feedback meetings that took place with the practicum supervisor and peer partner were audio recorded. Access to the audio record files was provided through an encrypted online drive. The analysis process for the feedback meetings began through transcription, as the purpose was to incorporate this data into the thematic analysis, basic transcription guidelines were adopted (Richards, 2003). The meetings were conducted in Turkish with a lot of code-switching when VEO tags were referenced or specific terms relating to teaching were used. The transcriptions were not fully translated to English, instead only relevant extracts that were used in the data presentation were translated.

3.6.3 VEO tag data

The VEO tag data is the data drawn from the VEO recorded lessons and includes the number of tags used in the lesson, the tagged instances and charts produced by the VEO app

displaying the tag use. The VEO app statistics charts were included in the data presentation as a display of VEO use. Additionally, the tag use was presented using frequency counts, to give an idea of which tags were used more often than the others.

In addition to providing an understanding of VEO use, the tag data was also used for triangulation as a descriptive comparison of tagged instances, instances included in the reflective essays and instances referred to in the feedback meetings was carried out. This comparison allowed for a deeper understanding of how exactly VEO was used for reflection.

3.6.4 VEO recorded lessons

Access to the VEO recorded lessons was provided both through the VEO portal and as downloaded video files. The lesson videos were used to explore any evidence of development in teaching practices. This was done through locating specific instances relating to the identified area of improvement and transcribing them for the data analysis. The lesson data was analysed through the lens of the area of improvement identified by each case study individual.

3.6.5 Interviews

Interviews with the participants were conducted in order to find out about their experience using VEO as an observation tool and the advantages and disadvantages of using VEO. The interview protocol was designed as semi-structured (Richards, 2003) with guiding questions prepared beforehand, but the participants provided with the space to expand and talk about what they found relevant in the process.

The UK context participants were interviewed by the VEO Europa project research assistant and the interviews took place face to face. The research assistant met the participants at their availability in their schools and recorded the interviews on an audio recording device. The interview questions were prepared based on the VEO Europa project research questions (see Appendix C), as the interviews were semi-structured not all questions were asked in all of the interviews. The Turkey context participants were interviewed by this researcher and a protocol in line with this study's research questions was prepared. Slightly different questions were prepared for the trainee teachers and the supervisor as the protocol for trainees included questions on reflection and improvement of practice (see Appendix D). The questions were translated into Turkish beforehand to give the participants a language

choice for the interviews. Due to lack of participant response only two interviews were conducted with the Turkish participants, one with the practicum supervisor and one with the second case study participant Selim. Also designed as semi-structured, these interviews took place online via Skype and lasted between 40 to 60 minutes. The decision regarding the interview language was left to the participants, to allow them to choose whichever language they felt more comfortable with. The practicum supervisor opted for English, while the trainee teacher chose to communicate in Turkish.

All of the interviews were transcribed verbatim, and the Turkish interview was translated for the relevant extracts. The interviews were analysed using thematic analysis (Braun and Clarke, 2006b) in order to find out the advantages and disadvantages of using VEO. The added transcription element provided further familiarization with the data which contributed to the analytic process.

3.7 Analysing reflective writing in this study

3.7.1 Finding a framework

Drawing from similar studies on reflection and taking into account the data collected for the current study, an analysis of participants' reflective writing was determined as the most suitable way to gain an understanding of 'how' participants reflected and to answer the question 'to what extent does VEO support teachers' reflective practices?'. Consequently, one strand of the literature review was on studies concerned with analysing and evaluating reflection in order to uncover and review any existing frameworks for analysis. The literature review revealed several frameworks differing in number of levels, creation methods, clarity to the reader and detail in description. This section of the methodology describes the process of preliminary analysis with existing frameworks and how this led to the creation of a new reflective framework. The process is depicted in Figure 3.6 below which is followed by a detailing of each step.

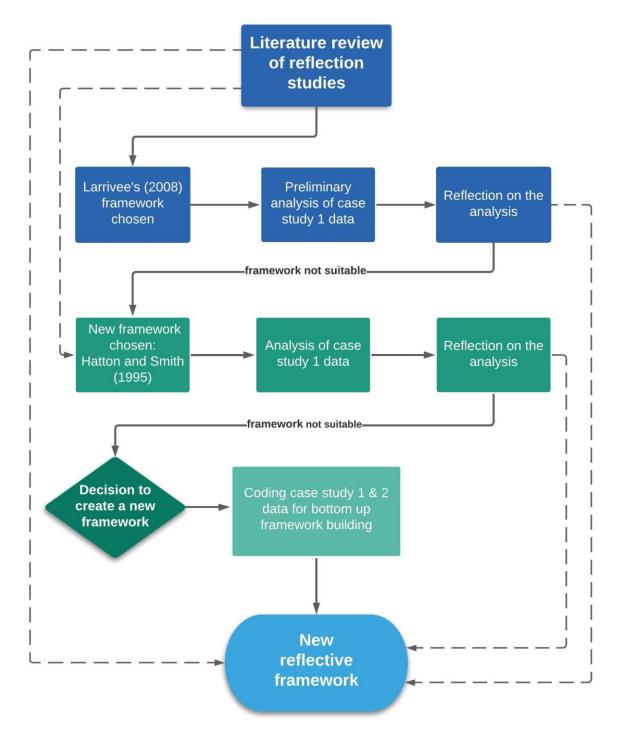


Figure 3.6 Analytic process for the new reflective framework

In the early stages of the study, Larrivee's (2008) reflective framework was selected as the tool for analysing the reflective essays. In her paper detailing the development of the framework, Larrivee (2008) refers to her framework as an assessment tool to be used to establish teacher's level of reflection. On the surface, this appeared to be perfectly fit for purpose. Larrivee provides a detailed synthesis of levels of reflection in the literature, making clear the foundation of the initial levels for her framework. Based on the literature, descriptors for each level were determined and put into survey format. This survey was then sent out to the participants of the study, who were selected authors and researchers that had carried out research in teacher development and reflection. The resulting framework, which was essentially co-created by 40 experts in the field, consists of four levels: pre-reflection, surface reflection, pedagogical reflection, and critical reflection. The transparency regarding the instrument creation process, the steps taken for validity, the detailed descriptions of the levels and the accessibility of writing were all factors that strengthened the initial decision to employ the framework.

An analysis of the reflective essays of case study 1 was attempted using Larrivee's framework. This initial analysis made it clear that the framework was not a good fit for the data in hand for several reasons. Larrivee's framework focuses on both breadth and depth of reflection (Lane et al., 2014) in its levels. For instance, while the low-level Surface Reflection is concerned with teaching methods and tactical issues; Pedagogical Reflection has a focus on students and is guided by a pedagogical framework; and in Critical Reflection the teacher is expected to examine their philosophical ideologies. It proved quite a challenge to apply this dual focused framework to the data in hand due to several reasons:

- Context the participants are pre-service teachers teaching for the first time
- Focus the reflective essays were written specifically on teaching experiences with the goal of improving teaching
- Study design the essays were written upon viewing a video recording of their teaching

The participants of this study were asked to reflect on their practicum teaching experience via writing. The reflection being specifically on experience and the added element of video (VEO) quite understandably increased the focus on the observable. Thus, while issues

surrounding teaching methods and tactical matters were frequent subjects of the reflective essays, there was almost no mention of philosophical ideologies, ethics, and morals. Analysis with Larrivee's framework placed the majority of the reflective segments into surface level, and critical reflection was non-existent. Although such an analysis would echo literature findings on pre-service and beginning teachers' reflections, classifying all methodological concerns as surface level was seen as a poor representation of the data in hand, especially when the factors outlined above were taken into account.

Larrivee's framework was created to establish the overall level of reflection of teachers and although she provided short descriptions of each level, the finalised tool operated in the form of a survey providing options for both facilitator and self-assessment. Attempting an analysis of written reflection with this framework made one thing clear: it is a challenge to implement a framework outside of its intended use. There were two takeaways from this process:

- a reflective framework specifically created for analysing writing might work better
- a framework that does not combine the content of the reflection and how reflection
 is carried out would allow for a better representation of the data in hand

Keeping these learnings in the forefront, the second framework selected for analysis was Hatton and Smith's (1995) reflective framework. This framework was created specifically for the analysis of reflective writing and the authors provided criteria for recognizing different types of reflective writing. The framework consists of four levels listed as Descriptive Writing, Descriptive Reflection, Dialogic Reflection and Critical Reflection (see Table 2.6). Differing from Larrivee's, Hatton and Smith's framework has a primary focus on depth of reflection. The shift between levels takes place as the writing moves from being solely descriptive to incorporating evaluations and justifications, to taking into consideration alternative viewpoints and different perspectives and to stepping back to analyse the experience. This focus shifts only at the final level of critical reflection, for which one is expected to demonstrate awareness of the influence of historical and socio-political contexts.

The selection of this framework was based on:

depth of reflection being the primary focus of the framework,

- the framework having been created to analyse writing,
- the explicit criteria the authors provided to identify different types of reflective writing,
- the authors' emphasis on the non-hierarchical nature of the framework levels,
- the framework's significance in the literature.

Hatton and Smith's approach in focusing on depth of reflection and placing value on 'lower' levels of reflection better aligned with the position taken in this study and a second round of analysis was carried out using their framework. The analysis of case study 1 reflective essays led to further understandings of the framework levels and analysing reflection. Table 3.3 shows a summary of the coding for the two essays in the form of frequencies.

Table 3.3 Case Study 1 – Lale's reflective essays coded with Hatton and Smith's (1995) framework

Levels of Reflection	Essay 1	%	Essay 2	%
Descriptive writing	17	38%	18	55%
Descriptive reflection	15	33%	8	24%
Dialogic reflection	13	29%	7	21%
Critical reflection	0	0%	0	0%
Total	45	100%	33	100%

An overview of the reflective coding shows that most of the writing consisted of levels categorised as descriptive. Hatton and Smith (1995) define descriptive writing as a description of events without providing reason or justification and categorise it as nonreflective; this level comprises 38% of the first essay, and 55% of the second one. The second level of the framework which includes describing while providing reason justification, recognising alternative perspectives and the incorporation of multiple factors consists of 33% of the first essay and 24% of the second one. Added up these first two levels form 71% of essay 1 and 79% of essay 2, depicting a picture of largely descriptive reflection. With critical reflection being non-existent in both essays, the remaining percentages belong to dialogic reflection: forming 29% of the writing in essay 1 and 21% in essay 2.

A number of important understandings came from the coding process with this framework and an overview of the analysis: an appreciation of what Hatton and Smith (1995) define as dialogic reflection and an identification of some areas suggesting the framework is a poor fit

for the data in hand. Starting from the ways the framework does not appear suitable in its current form: one of the matters is the highest level of the framework – critical reflection – and how this is defined. As mentioned above, for Hatton and Smith critical reflection is displaying an understanding of the wider context, considering socio-political, moral, and ethical matters that influence teaching. Defining it as such, the authors appear to shift the focus of the framework from depth to breadth at the highest level. Initially this aspect was disregarded due to the suitability of the remainder of the framework, however after the analysis and the lack of any evidence of 'critical reflection' it became clear that having this definition of reflection as the highest level for this context was not suitable.

The second issue was regarding the first two levels of the framework: descriptive writing and descriptive reflection. A percentage view of the coding showed that most of the writing (more than 70%) was in these first two levels. Presented as so, this is in line with previous findings in the literature in studies looking into pre-service/beginning teachers' reflections. However, one of the aims of this study is to examine in detail how teachers are reflecting; and categorizing most of the writings as 'descriptive' does not provide the fine-grained detail that was aimed for. Hatton and Smith's (1995) descriptive reflection is a step above pure description and contains numerous actions including reasoning, providing justification, considering alternative viewpoints, and recognizing different factors. Grouping all these thought processes and actions together under the title 'descriptive' seemed quite restrictive, especially as the bulk of the data was placed in these 'descriptive' levels.

One other drawback of the framework was the lack of focus on evaluative and affective aspects of reflection. In the reflective essays the participants provided evaluations, reflecting on how a certain activity, or teaching instance went and how they felt in certain moments. They did this by using evaluative adjectives such as good, bad, successful, unsuccessful etc. and feelings words. These sections gave the reader an understanding of how the trainees perceived a certain classroom instance and how they felt in the moment. These added another layer and richness to the reflections, differing from the linear focus on what happened and why. As the framework level descriptors did not include a focus on these elements, these segments were merged with existing descriptive levels further contributing to the accumulation of codes in the first two levels.

While the sections above discuss reasons why the framework was deemed unsuitable to analyse the data in hand, the process of analysis was of course not in vain. In addition to the clarity that came as a result of the analytic process, a significant gain was noticing how well defined and fitting the level of Dialogic Reflection was for the data in hand. Hatton and Smith identify dialogic reflection as reflection that:

'demonstrates a "stepping back" from the events/actions leading to a different level of mulling about, discourse with self and exploring the experience, events, and actions using qualities of judgements and possible alternatives for explaining and hypothesising. Such reflection is analytical or/and integrative of factors and perspectives and may recognise inconsistencies in attempting to provide rationales and critique' (p. 48)

This notion of dialogic reflection in the form of self-dialogue as described by the authors was present in the data. The idea of 'stepping back' from the events was especially relevant as the participants were reflecting via video recordings and literally seeing themselves in action as an outside observer would. This form of reflection was apparent in their questioning stance, displays of uncertainty, examination of contradictions between the expected and the reality as well as a search for alternatives – all thought processes akin to having a dialogue or discussion with one's self.

Takeaways from analysis with Hatton and Smith's framework

- The framework for analysis should fully focus on depth of reflection,
- Further detailing of 'descriptive' levels is needed in order to get a better understanding of how pre-service teachers reflect,
- Evaluative and affective writing should have a place in framework level descriptors,
- Hatton and Smith's Dialogic Reflection definition depicts a form of reflective writing that is present in the data and should be incorporated into the framework for analysis.

3.7.2 Development of a comprehensive framework to analyse VEO-led reflections

After reviewing multiple reflective frameworks and carrying out an analysis with two of them (Larrivee, 2008 and Hatton and Smith, 1995) the approach was shifted to a data led one. Instead of coding the reflective essays with an existing framework, a bottom-up

approach was adopted to gain a detailed and well-rounded understanding of the data that would lead to the creation of an analytic framework.

Preparing the data for analysis

In order to prepare the data for coding the first decision to make was whether to code the reflective essays as whole or to segment them into reflective chunks and code each segment. Although not every study provides details of their coding practices, examples of both methods can be found in the literature. While Kember et al. (2008, p. 372) argue for holistic coding at the whole paper level stating that segment-based coding 'was not a fruitful exercise', segmented coding appears to be employed more frequently (Leijen et al., 2012; Ward and McCotter, 2004; Bain et al. 1999; Lee, 2005). Gaining a rich and detailed understanding of the data is one of the aims of this research project as a qualitative case study, thus the segmented coding method was chosen as the way forward. Another aspect influencing this decision was the fact that the data in hand consisted of only two reflective essays per case and the essays themselves were quite long and focused on several classroom instances.

The dividing of writing into reflective chunks is done by identifying shifts in focus (Bain et al., 1999; Ward and McCotter, 2004). Following in the steps of Ward and McCotter (2004, p. 248) 'the end of a chunk was identified by a change in the focus of reflection without a clear transition or connection to previous reflection'. For the purpose of coding, any writing that focused on a specific teaching action or classroom instance was considered as part of reflection (Ward and McCotter, 2004). Ward and McCotter's (2004) guideline that suggested looking for a change in focus to segment the writing was a helpful starting point and this method of segmenting was employed to carry out the initial analyses of reflective writing. However, a closer look at the data revealed that a more detailed guideline would be required to carry out the segmenting process properly. This was due to the complexity of the reflective writing. At first glance the reflective essays appeared well organized and straight forward with subheadings such as 'questioning strategies' 'L2 use', giving the reader an understanding of the focus of reflection. Yet, further analysis revealed the complexities, making it clear that the reflective writings did not necessarily consist of coherent paragraphs with a single reflective focus. Sometimes the participants referred to different instances in the lesson without providing any links in between, wrote about multiple examples of an

overarching focus without trying to link them together or focused on different subsections of an overall theme for reflection. In order to create transparency in the segmenting process, detailed written memos were taken by making notes of why the segmenting decision was made for any given chunk. An initial round of segmenting was carried out for the first reflective essays of both case studies. The preliminary segmenting was done with both case studies due to their different writing styles. After this the written memos were reviewed and compounded resulting in a list of segmenting guidelines further detailing and clarifying what is meant by topic/focus change.

As mentioned above the overarching segmenting guideline was that any shift in focus/topic identifies the end of one chunk and the start of a new one. Every teaching act/classroom instance was categorized as a separate chunk unless the author made explicit connections between instances. To go into further detail:

- topic change can be moving onto a different activity within the lesson, a
 chronologically different phase of the lesson, or reflecting on a different teaching act
 e.g., moving from 'questioning strategies' to 'classroom management'
- focus shift is identified when the overarching topic remains the same (same
 pedagogical topic or same classroom activity), but the trainee is now focusing on a
 different aspect of the teaching instance than the previous chunk. E.g., writing about
 instruction giving for activity A would be a separate chunk to focusing on the group
 work during activity A unless the author specifically connects the two
- a writing style present in the reflections is providing examples of teaching acts from various points in the lesson. The different examples are put in separate chunks if the author does not:
 - present them all as examples of a specific teaching act/method
 - bring them all together with a concluding summary/commentary

Once the guidelines were set the segmenting was carried out for all four of the reflective essays. The segmenting decisions were recorded by creating a 'segmenting log' for each essay where the reason for cut off and a short description of each segment were documented. The practice of making written notes of thought processes and decisions

made was of great significance due to the qualitative and single researcher design of the study.

Moving on from the segmenting the next step was to carry out a bottom-up coding of the reflective chunks. Learnings from the analyses carried out using two existing frameworks (Larrivee, 2008; Hatton and Smith, 1995) showed that quality of reflection was identified through coding with a focus on writing actions rather than content. When attempting to uncover the depth of reflection (as opposed to the breadth which is more content related) the emphasis is put on the actions the teachers take within their writing. Namely whether they are describing, providing examples, evaluating, justifying, reasoning, comparing, synthesizing, linking, analysing, etc. Thus, taking this position, the first step of the coding was to code with action verbs to gain a better understanding of how exactly the trainees were reflecting. The initial coding was done in a comprehensive and detailed manner with no attempt or intention to group codes, find succinct titles or limit the number of codes created. This free coding, only restricted by the focus on coding writing actions as opposed to content, aimed to provide a detailed overview of the data and rich grounds to build upon.

The next phase of the coding was the process of refining, clarifying, and aggregating. This included going over the codes to make sure they were all in line with the coding aim, merging and separating codes when necessary, and shortening the code titles that were in sentence structure into single or double worded codes to make them more succinct.

After the data was segmented and coded, the following step was to build the framework. For this, existing frameworks in the literature were consulted, both previously reviewed ones and ones that had been newly discovered through the ongoing literature review. As outlined above, certain elements of the framework had already been determined through analysis of the data with existing frameworks. These were:

- the framework focus would be on depth of reflection
- the base level would be description, adopting Ward and McCotter's (2004) and Jay and Johnson's (2002) stance on descriptive reflection. These authors all focus on the value of description stating that it should not be dismissed as a simple reporting of events, rather describing implies deliberate thinking (Ward and McCotter, 2004) and 'involves finding significance in a matter' (Jay and Johnson, 2002, p. 78).

 the highest level would incorporate some form of transformation, intention to change and/or display of new gained perspective. This is mirroring the Deweyan view of reflection where the reflective process is depicted as cyclical/spiral and the end goal is a transformation in some sense (Dewey, 1933; Korthagen, 1985).

Given that the focus and rough outline were clear, the next phase was to determine the middle levels through combining data analysis and the insights gained from reviewing existing frameworks in the literature. The next section presents the outcome of this process and introduces the reflective framework developed in this study.

3.8 The Reflective Framework

Numerous studies have influenced the framework creation process, however the resulting framework is largely adapted from Bain et al.'s (1999) five-point level of reflection scale, contains elements from Hatton and Smith's (1995) reflective framework and is influenced by Sparks-Langer et al.'s (1990) Framework for Reflective Thinking and Lane et al.'s (2014) four-level framework for reflective writing. Table 3.4 titled Pillars of the Reflective Framework shows a summary of similar reflective levels in existing frameworks that served as a source of adaptation and adoption in the creation of the new framework.

Table 3.4 Pillars of the Reflective Framework

New reflective framework	Similar levels in existing frameworks as source of adaptation/adoption	
Descriptive	 Description (Tsangaridou and O'Sullivan, 1994) Descriptive Writing (Hatton and Smith, 1995) Reporting (Bain et al., 1999) Purely Descriptive (D1) (Lane et al., 2014) 	
Evaluative	 Level 2 Responding (Bain et al., 1999) Descriptive and Evaluative (D2) (Lane et al., 2014) 	
Explanatory	 Level 4 – Explanation with tradition or personal preference given as the rationale (Sparks-Langer et al., 1990) Level 3 Relating (Bain et al., 1999) 	
Reasoning	 Level 5 – Explanation with principle or theory given as the rationale 	

	Level 6 – Explanation with principle/theory and consideration
	of context factors (Sparks-Langer et al., 1990)
	• Level 4 Reasoning (Bain et al., 1999)
Dialogic	Dialogic Reflection (Hatton and Smith, 1995)
Transformative	 Level 5 Reconstructing (Bain et al., 1999) High-level Reflection (R2) (Lane et al., 2014)

The Reflective Framework (see Table 3.5) consists of six levels: Descriptive, Evaluative, Explanatory, Reasoning, Dialogic and Transformative. While the number of levels is on the high side with the most common number of reflective framework levels being four in the literature, this degree of detail was seen necessary to gain a better understanding of the data.

Table 3.5 Reflective Framework

Levels	Description
Descriptive	Describing classroom instances in a matter-of-fact way with no value judgement, explanation, or evaluation and without explaining the impact or effect of actions
Evaluative	Providing an evaluation or value judgement of classroom instances/actions without detailing reasons for the judgement or making further inferences Reporting observations, initial realizations, and feelings
Explanatory	Surface explanation of actions/classroom instances, done by: Explaining referring to personal preference, opinion, or belief Explaining without linking to any principles, pedagogy, or context Explaining without referring to the impact or effect of actions Providing alternative course of action without evaluating action taken or providing reasoning for alternative

Reasoning	Moving beyond simple evaluation and surface explanation by: Providing reasoning behind evaluations and value judgements Explaining by referring to the impact or effect of actions Supporting explanations with links to teaching principles, pedagogy, or context
Dialogic	Stepping back to analyse classroom instances by: Evaluating a classroom instance or teaching strategy through multiple perspectives Approaching teaching acts with a questioning stance Discussing what worked and what did not by reporting on a problem-solving sequence Identifying or noticing areas for improvement Considering alternative actions/strategies based on evaluations or reasoning for change
Transformative	Expressing an intention of change or improvement for the future, based on new perspective gained from evaluating and analysing practice Displaying learning from experience Reporting on improvement or change based on previous reflections and learnings

Descriptive

The descriptive level answers the question 'what happened?' in its purest form. It is a reporting, describing of classroom instances with no added input in the form of evaluation, judgement, or explanation from the trainee. This level exists is numerous frameworks labelled as Description (Tsangaridou and O'Sullivan, 1994), Descriptive Writing (Hatton and Smith, 1995), Reporting (Bain et al., 1999) and Purely descriptive (D1) (Lane et al., 2014). In line with the previously detailed stance towards describing, this level is considered the base level upon which more complex forms of reflection can be built. Thus, it is vital that it is not

dismissed as 'simply describing', as without being able to notice and find significance in 'what happened' there cannot be the transformation of 'what can be improved'.

Evaluative

The evaluative level answers questions such as 'how did it go?' or 'how did you feel?'. This moves one step further than describing and is a view into the trainee's perspective on classroom events. The evaluation can be expressed as identifying successful/problematic parts of the lesson or it can be through the use of quality adjectives such as good, bad, challenging, wrong, etc. This level is the same as Lane et al.'s (2014) second framework level titled Descriptive and Evaluative (D2).

In addition to evaluations, the expression of feelings and surface level realizations are also in this level. The placement of affective elements in the second level of the framework was adopted from Bain et al. (1999), as reporting feelings can be found in level two of their framework under the title Responding.

The key characteristic of this level is that the evaluations are not followed through with any explanation or reasoning, essentially the 'why' to their evaluations or feelings is not provided.

Explanatory

The explanatory level is where some form of explaining can be identified. Sparks-Langer et al.'s (1990) Framework for Reflective Thinking had great influence on the formation of this level as they differentiate between rationales of explanations; placing personal preference, principle or theory, and context factors into separate levels. This explanatory level is single faceted and only covers explanations referring to personal preference, opinion, or belief, in line with the lowest level of explanation (level 4) in Sparks-Langer et al.'s (1990) framework. An example of this can be statements such as 'I gave implicit feedback because I believe that is the best way'. Such a statement expresses professional preference and belief, however, does not go any further to provide supporting links to either theory or context.

Another form of explaining was done in regard to student actions and classroom activities rather than the teacher's own actions. These explanations were identified as surface when they were focused on a single dimension and lacked further exploration or questioning. An

example to this can be statements such as:

'the students did not understand the instructions because the classroom was noisy'

While this type of statement indeed answers the question 'why' and provides an

explanation, there is no attempt to dig deeper, question further, look at the context or link
the situation to classroom pedagogy. Thus, this type of explanation remains at surface level
as the lack of further questioning makes it closer to a dismissive approach rather than a
constructive one.

One final form of reflective writing placed in this level is providing alternative course of action without evaluating action taken or providing reasoning for alternative. This is generally identified in sentences structured with 'should have/could have' statements that express alternative actions that are not supported with further reasoning. See the segment below as an example:

'In silent cinema activity, a student tried to say "engagement" (06:18). I waited for her to try again. She tried three times but could not pronounce it so I said it. I could have asked another student to say it.' (LR1_27)

In this segment the trainee is describing a feedback instance relating to pronunciation, detailing a student struggling to pronounce the word 'engagement'. She then lets us know that she gave feedback by providing the correct form herself. This is then followed by stating that peer correction could have been used instead. Although the trainee shows knowledge of a possible alternative here, she does not evaluate the action taken or provide a reasoning as to why peer correction might have been preferable. Without these elements, the suggestion for an alternative course of action remains a superficial approach to change and appears as reactionary.

To sum up, the explanatory level of the framework depicts the first step of providing reasoning or justification of actions and looking for alternatives. However, being the first step into explanations, the reflections remain one dimensional and surface level.

Reasoning

The fourth level of the framework, reasoning, is where the reflections start to have more substance. This is where the trainees move beyond simple evaluations and surface

explanations. Moving into this next level can look like supporting evaluations with rationale, for example instead of leaving it at 'the listening activity did not go well' it is taking it one step further with 'the listening activity did not go well because it was too difficult for the students' level'. Reflection in this level can also take the form of explanations that move beyond personal preference and adopt multiple perspectives, considering the impact of actions on students or providing links to teaching pedagogy or context.

Building onto the Explanatory level, the reflections and explanations in the Reasoning level are less reactionary and more grounded in practice with a display of deeper understanding of reasoning, pedagogy, and context. It encapsulates the Level 5&6 of Sparks-Langer et al.'s (1990) Framework for Reflective Thinking and shares elements with Level 4 of Bain et al.'s (1999) reflection scale which is also titled Reasoning. In contrast to these, the levels of both Explanatory and Reasoning would have been coded as Descriptive Reflection according to Hatton and Smith's (1995) framework.

Dialogic

The Dialogic level has been adopted directly from Hatton and Smith's (1995) framework, as the initial analysis showed that what the authors aptly described as Dialogic Reflection was present in the trainees' reflective essays and clearly distinguishable from other forms of reflecting.

One of the key identifiers of this form of reflection is the notion of stepping back — a metaphor provided by Hatton and Smith (1995). While its metaphorical sense remains, the act of reflecting via video adds the literal dimension of stepping back and viewing oneself and one's practice from outside. In both senses the notion of stepping back can be understood as reflecting on instances by looking at the bigger picture. This means moving away from thought processes that are grounded in making oneself and one's actions clear through explanations and reasoning, towards an analytical and questioning lens. Adopting this stance leads to 'a different level of mulling about' (Hatton and Smith, 1995 p. 48) which can include exploring experiences by considering multiple perspectives, making connections, noticing inconsistencies, identifying areas for improvement, and searching for possible alternatives. Hatton and Smith (1995) liken this form of reflection to a 'discourse with self', which gives the level its name.

Another form of writing included in this level is trainees discussing what worked and what did not by reporting on a problem-solving sequence. These segments are detailed and step by step accounts of trainees dealing with an issue or an unexpected circumstance in the lesson. They include reports of the different strategies employed in action, their outcomes and how the issue was resolved. This form of writing is not explicitly included in Hatton and Smith's (1995) dialogic reflection. However, the expansion of scope was seen suitable as the level of detail in these segments implies a deeper engagement with the experience and an analytic stance thus making it in line with the original definition of dialogic reflection.

Transformative

As detailed above, this framework adopts the view of reflection as a cyclical process of which the outcome is some form of transformation. Thus, the final level is concerned with change or improvement based on new gained perspective from the process of reflection. The transformation can be in the form of outlining specific plans of improvement for future practice, expressing learnings or takeaways from the process of reflection, or reporting on change that stemmed from previous reflections. This level is called 'High-level Reflection (R2)' in Lane et al.'s (2014) framework and 'Reconstructing' in Bain et al.'s (1999).

It should be noted that as the final level of the framework the plan for change/improvement is built upon the previous steps, thus differs significantly from the providing of alternatives placed in the Explanatory level.

3.9 Trustworthiness

Displaying the quality and rigor of the undertaken research is one of the responsibilities of the researcher and 'all research is concerned with producing valid and reliable knowledge in an ethical manner' (Merriam and Tisdell, 2016, p. 237). While quantitative methods discuss this with the terms validity and reliability, Lincoln and Guba (1985, cited in Bazeley, 2013) have put forward alternative criteria for qualitative research as trustworthiness and its components: credibility, dependability, confirmability and transferability. Despite the existence of alternative terminology, there is no consensus amongst qualitative researchers with some adopting the terms of trustworthiness/credibility and others using validity/reliability, but define them in a qualitative sense (Bryman, 2012). Regardless of the adopted terminology, these concepts are concerned with displaying the appropriateness of

chosen methods, data collection instruments, analytical decisions as well as demonstrating 'a sound basis for the researcher's inferences about the phenomenon being investigated' (Bazeley, 2013, p. 402).

Yin (2016) describes a credible study as 'one that provides assurance that you have properly collected and interpreted the data, so that the findings and conclusions accurately reflect and represent the world that was studied' (p. 85) and provides four ways to strengthen credibility as building trustworthiness, triangulation, validity and rival thinking. Drawing links between these methods and philosophical orientations, Yin (2016) states that the relativist position might emphasize the notion of building trustworthiness. This can be done through making clear the study topic and participant selection and justifying any methodological choices (Yin, 2016). Lincoln and Guba (1985, cited in Patton, 2015) also state that prolonged engagement, in other words time spent at the research site and with the participants is a way to build trustworthiness. The researcher's awareness of their biases and subjectivity, namely reflexivity also contributes to the trustworthiness of the study (Maxwell, 2013; Patton, 2015). Other techniques that can be used to strengthen trustworthiness include respondent validation/member checking, triangulation, providing thick descriptions and rich accounts of the data and keeping audit trails (Creswell and Miller, 2000; Bryman, 2012; Maxwell, 2013).

Trustworthiness in this study is strengthened in a number of ways. First of all, a clear description and justification of the study design and case selection is provided. The researcher's possible influence in the data collection processes and analysis is reflected upon by holding awareness of the shared professional/national/contextual backgrounds with the participants. Data is collected through multiple sources including interview, written reflection and video data. These are triangulated to strengthen the analysis and findings where possible. A detailed and step by step account is provided for the reflection analysis process which includes the development of a new reflective framework. When engaging in analysis extensive memos were kept to track the analytic process and inform analytic decisions, this included taking notes of any coding decisions made. As this is a single researcher study, coder reliability was strengthened by revisiting the data after a certain period of time with fresh eyes and making note of any changes in the coding process (Richards, 2015). In the analysis thick descriptions are provided where the data permits and

data extracts are included to allow the reader to make their own judgements of the interpretation of the data.

3.10 Ethical Considerations

Ethical approval for this study was gained on 31.01.2017 from the Faculty of Humanities and Social Sciences Ethics Committee of Newcastle University prior to the start of data collection. Majority of the data was collected within the VEO Europa project which is a funded Erasmus+ project (2015-1-UKO1-KA201-013414) and both the UK and Turkey partner universities obtained necessary ethical approval from their organisations.

Researchers summarize the most commonly accepted ethical issues researchers need to address as:

- Ensuring voluntary participation, informing of the right to withdraw, and getting informed consent,
- Protecting the research participants by assessing the potential benefits and risks of engaging with the research and avoiding harm,
- Ensuring the privacy of participants and avoiding deceit (Bryman, 2012; Silverman, 2017; Creswell and Poth, 2018).

The participants in this study were given an information sheet (Appendix A) detailing the study purposes and the forms of data to be collected, ensuring the anonymization of their identifying information, and informing them of their right to withdraw. Following this, written consent was obtained through participants signing an informed consent form (Appendix B) which included tick boxes to reiterate exactly what they were consenting to. The forms were translated into Turkish for the Turkey participants to make sure the information was presented in a clear and understandable manner. The study presented no harm or risks to the participants, as in both contexts VEO was integrated into lesson observations that were already taking place as part of practicum or continued professional development. The pre-service teachers did get assessed based on their practicum lessons as a part of the programme, however they were given the option to switch practicum groups if being video recorded made them feel uncomfortable in any shape or form. Due to the cohort size of the ELT program at the time of data collection, there were a total of ten practicum groups, giving the unwilling pre-service teachers plenty of options.

The safety of the data collected was ensured by keeping it on secure cloud systems. The interview data and transcripts were kept on a password protected drive in the Newcastle University system. Whereas the VEO videos were kept on the secure VEO portal. The VEO portal has sharing limitations built in to increase data security where only the owner of the video can share it with people in their organization. Upon obtaining proper consent I was added to the VEO Turkey partner's organization on VEO portal which allowed them to share the recorded lessons with me. While obtaining ethical approval from Newcastle University, a data management plan was also submitted outlining the data securing processes mentioned above. The privacy of the participants was ensured through anonymization by providing pseudonyms and deleting any identifying information in the collected data.

Chapter 4 VEO User Experience

The analysis will be presented in three chapters: part I, presenting the VEO user experience through the analysis of the affordances of and challenges with using VEO, part II, looking into how the pre- and in-service teachers used VEO for their professional development and part III, examining the two pre-service teachers' reflective writing which was done using VEO. This section of the analysis attempts to provide an answer to the third research question 'what are the advantages and disadvantages of using VEO?'. It is presented before the case studies as a way to familiarize the reader with the overall VEO experience, thus increasing the understanding of the case study contexts. For this overview, data was examined from the wider data set including Turkey and UK data. The analysis was mainly based on interview data with relevant sections of reflective essays and post-observation feedback meetings also included. The analysis being conducted for the whole data set allowed for the inclusion of different perspectives. While some participants used VEO as the observer others were part of the study being observed. The trainee teachers from the Turkish context experienced both roles as their lessons were observed and tagged by their practicum supervisor, but they also took on the role of observer for their peer partners.

The analysis was carried out using thematic analysis guided by the third research question. The findings will be presented starting with the affordances of using VEO, this will be followed by the themes summarizing the challenges with using VEO and the chapter will conclude with a short summary of additional findings.

4.1 Affordances of using VEO

The main theme affordances of using VEO will be presented through the three sub-themes: affordances of video, affordances of tagging feature and practical elements. Figure 4.1 displays the main and sub-themes.

4.1.1 Affordances of video

Power of self-observation

A major theme emerging in relation to affordances of video was the power of selfobservation and noticing. The perspective gained from being able to watch oneself from the outside was echoed by all of the participants. The Turkish cohort trainee teachers spoke highly of the contribution of VEO to their practicum experience, linking this to the opportunity they had to watch themselves 'from the third eye' (Kerem). As Elif wrote: 'of course the most effective help of VEO was watching myself teaching, because I had chance to evaluate my teaching to be better in my following lessons.'

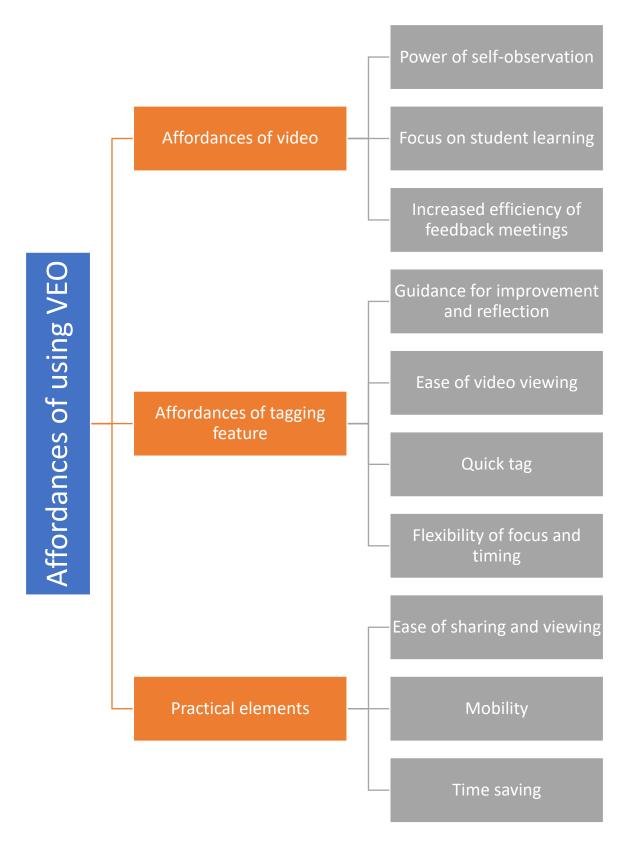


Figure 4.1 Affordances of using VEO

In addition to the general comments, some trainee teachers commented on how video provided a holistic view of their teaching: Ayla said '[VEO] helped me to realize my strengths and weaknesses as a teacher' and remarked that video observation should become standard practice for practicum programmes. In a similar vein Beren remarked on the importance of self-observation coupled with feedback stating: 'If I didn't see myself while teaching and I didn't receive any feedback from my teacher and my peer, I wouldn't improve myself that much.'

Reflecting on his practicum experience Mete touched upon the complexity of the classroom and the affordance of self-observation in relation to it, stating 'Recording is a good way to evaluate the process because it is too long that a person can't realize all steps of it.'

Similarly, while sharing his stance on video self-observation, Selim stated:

'Seeing yourself is something else. During the lesson we are in high gear, so we cannot just stop and evaluate ourselves. So even without the video, even if just a peer or colleague comes to observe your lesson, takes notes, and gives you feedback it is useful. When even that is useful, getting to record and watch yourself, and have others watch it as well if needed is exponentially more useful I believe.'

Comparing the effectiveness of peer observation to self-observation Selim touched upon the issue of objective viewing: 'I mean there is no guarantee that your peer will see your mistake or provide you with accurate feedback, but when you watch yourself maybe you can see it more objectively or correct yourself going "oh look that's what I actually did there". I mean I think this is very important.'

Sam, a deputy head teacher from the UK cohort, also touched upon the same notion of objectivity in self-observation and how video allows one to bypass the biases of the observer:

'We still see that VEO is a wonderful- we're an advocate of its ability to support teacher development because as I've mentioned before they [the teachers] really benefit from the fact that they can watch their own lesson back and make their own judgement on what they've seen happening rather than just listening to me give an idiosyncratic view on what I think is happening. And they say that's really powerful,

it's all powerful actually the fact that they're actually watching their own performance'

In addition to bypassing possible shortcomings or biases of the observer, Sam also emphasized the motivational aspect of viewing one's own teaching for developmental purposes: 'it's motivational you know if you see something in your own practice that you understand went wrong you're much more likely to fix it than me sitting there and saying I think that's not right.'

In the same vein as bypassing biases of the observer, the Turkish cohort used the video as shared evidence during their post-observation feedback meetings. The extracts below show how the supervisor Okan watched the relevant part of lesson with the trainee before moving forward with the feedback:

Extract 4.1 Batu Post Observation Meeting / SP: Supervisor

79	SP:	er:: now for instance when we look at the type of
80		questions you asked their answer might be quite limited
81		for instance let me have a look ((they view a tagging on
82		VEO portal))

Extract 4.2 Eda Post Observation Meeting / SP: Supervisor

146	SP:	err:: now the instances where the students did not
147		answer. For instance, wait. You ask a question there is
148		no answer how did you manage those kinds of troubles
149		that's important. For instance, there is one here, let's
150		see what happened
151		((they watch tagged instance on VEO portal))

In both extracts above we see Okan (the Turkish cohort supervisor) refer to the video and watch the tagged instance during the meeting. In Sam's words this allows the trainee teachers to 'make their own judgement on what they've seen happening'.

In the extract below once again, we see Okan referring to the video, this serves as a reminder for both parties as after they watch the instance Okan asks (line 126) what the main purpose of the activity was.

Extract 4.3 Kerem Post Observation Feedback Meeting / SP: Supervisor KR: Kerem

118	SP:	at minute eight you gave a text ermm a reading aloud activity
119	KR:	hmhm
120	SP:	it started like that, you read it first
121	KR:	hmhm
122	((vide	o playing))
123	SP:	then the students started to read
124	KR:	hmhm
125	((vide	o playing))
126	SP:	now before we get started on this, however long it took ermm what
127		was your main purpose with this activity?

Similarly, some of the trainee teachers also referred to the video while giving peer feedback. This not only allows the observed teacher to remember the instance, but also the observer to make their point clear. In the extract below Eda's peer talks about a silence during the lesson and views the tag to reinforce her point:

Extract 4.4 Eda Post-Observation Feedback Meeting / PR: Peer ED: Eda

15	PR:	actually, at the beginning the class was silent as usual
16		which is how they are generally
17	ED:	yes
18	PR:	they started talking later on, a bit later they started
19		to speak and answer
20	ED:	uh huh I was doing presentation in the beginning that
21		also has an effect
22	PR:	huh maybe because look for example I tagged silence at
23		1:43, let me show you, the students don't say anything
24		((they view tagging on VEO portal))
25		they don't answer the question in any way which happened
26		with me too and in previous presentations if you remember
27	ED:	uh huh

Continuing with the impact of self-observation, teachers mentioned what they noticed and picked up from watching themselves teaching. Without going into specifics Lale mentioned how video allowed her to notice the 'minor mistakes' of her practice (see section 5.1.2). Going into further detail Selim recounted a feedback instance he noticed thanks to supervisor feedback and video. Similarly, Kelly noted that she noticed her limited focus on pronunciation while teaching, specifically that she corrected students' mispronunciations but did not ask them to produce the correct pronunciation themselves. She also noticed how her actions differed from her perception. In the interview extract below she talked

about how she noticed she struggled with allowing students quiet time to make a record of new vocabulary items:

'in my mind I feel it's quite slow so- but I think when you watch it back on film I'm a bit flappy and I'm talking too much and I- they do need a bit quiet time to get words down or to consolidate something and that's fine it doesn't always have to be all singing and dancing which I think I still am in danger of doing sometimes'

Focus on student learning

The noticing affordances of video quite naturally extended to noticing aspects of student behaviour and learning as well. This focus came up during the interviews of the UK participants from the high school context as a result of their unique observation techniques. Sam, the observer, would start off the lesson by recording from the back of classroom and at various points during the class he would walk around the room, sitting next to different groups of students observing them, asking their opinions of activities, checking if they understood the instructions or if they were able to follow the lesson content. Referring to his method of observation as really useful Sam stated that 'the big power of VEO is the student voice aspects of it.'

Illustrating the effectiveness of this observation method, Sam described an instance that took place after observing a lesson of science teacher Matt:

'this is the real power of it because I'd listen to the lesson and I asked him [the student] what's transfer, then he says I don't know whereas he [Matt, the teacher] just assumed he did know that, and when he watched the video he was like Christ just didn't know what transfer is! I'm just teaching it as if they still all know what transfers are and they don't and that prompts- (...) and something as specific as that you can see now that Matt now knows they don't know it'

The above extract perfectly illustrates how Sam's observation method of getting student feedback in class with video uncovered the mismatch between the teacher's assumption of student knowledge and the student's actual knowledge.

Having had his classes observed in the same manner, James, the geography teacher, comments on the experience as below:

'he [Sam, the observer] would ask them [the students] for their opinions and it's interesting to hear their perspective on activities and sometimes you'll organize an activity in a certain way because you want to get something out of it and the pupils often recognize that and it was really quite rewarding when they would say how positively they viewed the lesson what they were doing what they were learning and normally you never hear that you never get that feedback'

In addition to the student voice aspect, one teacher (Matt) also recognized the power of video in tracking student progress over time and stated that this type of longitudinal comparison would give a more accurate picture of progress:

'it would be good actually you know I didn't do it but it would be quite good to actually look at snippets from the first video and then compare it to the third video (...) it's not right to assess progress in half an hour really what can you say but over a course of a number of lessons or a number of months you should see the students have much better study skills are more engaged in their learning'

Increased efficiency of feedback

A final aspect of video affordances that became apparent in the data was its impact on feedback practices. A common thread relating to the efficiency of feedback/debriefing meetings with video was the elimination of dependency on recollection. Matt, recounting his experience of using VEO as an observer, described the shift as below:

'So, the first thing I found about it is that it changed the dynamics of the lesson debrief. Usually it would be done in my office you'd have the piece of paper in front of you and as I say it would be a two way conversation but it was very much saying this is what I liked about your lesson and then you know can you remember doing that or you might remember this and eheh the best thing I find for this is when you're writing it up often it's you know two or three days after you actually saw the lesson you watch the video and then it all comes flooding back erm rather than trying to look at your notes and piece together what actually happened.'

One of the two points to emphasize here is the shift in dynamics: the observer in a classic paper-pen observation scenario most likely has a clearer picture of the lesson they just

observed than the teacher who taught the lesson. This is established in the power of self-observation section that outlined how teachers noticed aspects of their teaching they were unaware of through video. Thus, the existence of video for the feedback meeting allows both parties to have access to the same information which in turn can lead to a more fruitful discussion. The second point of focus is the accuracy of feedback. As Matt stated within the busy schedule of teachers it is likely for the observer to forget details of the lesson they are providing feedback on, thus in this context the video serves as a useful reminder alleviating the need to rely on memory.

A similar point is made by Okan, the practicum supervisor of the Turkish cohort. Referring to his experience with providing observation feedback without video he stated: 'the first thing that they say normally to me err they said to me in the past- other students said to me in the past was that they forgot what they did in the class.' As a result of difficulty in remembering specific classroom instances, Okan recounted that the comments trainee teachers made about their teaching 'used to be general comments on classroom management, on the use of materials in general or activities.'

After observing the trainee teachers' lessons with VEO, Okan incorporated the video into the feedback meetings as well. Changing the structure of feedback meetings, this allowed both the trainee teacher and supervisor to watch the lesson video together and gave the trainee teacher the opportunity to comment on their performance in a more specific manner.

The extracts below show Okan referring to the tagged instance in video during his feedback meetings:

Extract 4.5 Kerem Post Observation Feedback Meeting / SP: Supervisor KR: Kerem

71 72	SP:	for instance, here, take a look, here you said ermm was / were structure ((video playing)) for instance here the
73		student repeated it as structure
74	KR:	hmm I regretted saying that later on, but it was already
75		out
76	SP:	yes it was out, but basically the was/were subject, tenses are subjects
77		that are most easily integrated into body language

Extract 4.6 Eda Post Observation Feedback Meeting / SP: Supervisor ED: Eda

SP:	now let's have a look
	((SP checks his taggings on VEO portal))
	now actually you did get an answer from one student the
	boy tried to say something and you complete it, telephone
	etc. something meaning based started and then I think you
	moved pass, the warmup was done was it?
ED:	uhh no
	((they continue to watch the same tagging))
SP:	okay did the Chinese whispers part, the Chinese whispers
	activity work?
ED:	I mean not really
SP:	why didn't it work do you think?
ED:	I mean couldn't really- I guess I couldn't really
	organize the kids
SP:	It might have been instruction related. Let me check.
	Let's check here the second minute err
ED:	I've always struggled with instructions
	ED: SP: ED: SP: ED: SP:

In the extract above (4.6) we see the supervisor and trainee teacher walk through a specific classroom instance together which is only possible with the existence of video. In line 31 Okan asks if the Chinese whispers activity worked and follows this up by asking Eda's take on why it did not work (line 34). Following this they further investigate the instance to see if the issue was instruction related (line 37).

4.1.2 Affordances of tagging feature

Guidance for improvement and reflection

One of the affordances of the VEO tags mentioned was how they provided guidance for improvement and reflection. The trainee teachers in the Turkey cohort, who had access to three choices of tag sets, commented on the framework of focus provided by the tags. Selim commented on the tag sets stating 'the focal points were nice, they provided us with a relevant framework, and we evaluated ourselves accordingly that was nice. I mean it included tags that take into account every aspect of a teaching experience.' Similarly Mete reflected on how VEO built upon regular video with tags as he said 'it [VEO] gives a chance to focus on teaching skills, classroom management with tags. Thanks to them, whenever I want to see my teaching, I can watch with tags and this helps me to see our detailed

characteristic during the lesson.' Emphasizing how the tags provided guidance for reflection Eda stated 'the tags make easier to analyse our teaching because we know where to focus owing to these tags.'

The tags also allowed the Turkish cohort supervisor to extend his guidance for reflection beyond the post-observation meeting. As he would frequently end the feedback meetings with a road map for the students, telling them which tagged instances they need to focus on. This level of detailed guidance would have been difficult to provide without the tags. Extracts below show how Okan provided guidance for future and individual reflection referring to specific tags such as instruction, feedback, and management:

Extract 4.7 Eda Post Observation Feedback Meeting / SP: Supervisor

63	SP:	the clarity of instructions is extremely important. In
64		fact my advice to you is to focus one by one on all of
65		the instances related to instructions. There are steps to
66		instruction giving at first you start and give
67		directives, use your body language a lot, you use
68		emphasis on important words

Extract 4.8 Eda Post Observation Feedback Meeting / SP: Supervisor

260	SP:	erm essentially when I share the video with you I think
261		you should go over the instructions, how you give feedback
262		after students speak, your own language use when ermm
263		giving instructions or other things giving feedback, go
264		over what we discussed

Extract 4.9 Mehmet Post Observation Feedback Meeting / SP: Supervisor

312	SP:	It was good that you asked for elaboration after the falses in the third
313		exercise, the true false. Check out those instances, I mean what did
314		they say after you said why, how did you respond to their answers,
315		sometimes errm in some instances you just said okay and moved 316
		along maybe you could have said more

Extract 4.10 Melis Post Observation Feedback Meeting / SP: Supervisor

111 SP: you check out the instances I tagged as management

Kelly who created her own tag set in line with the learning aims of the DELTA programme reflected on how the specific tag selection increased her focus on improvement during the lesson:

'having knowing what the tags were made me conscious or I tried to consciously focus on those areas. So in some sense I suppose it's perhaps a bit more powerful than just having areas to work on that someone writes about and then says I hope they're gonna focus on the next time they're in the room as opposed to someone actually with those areas of focus tagged and pressing them that's a bit more of a sort of umm- there's a bit more of a definite follow up then potentially isn't there I suppose.'

While Kelly referred to her conscious focus on specific areas stemming from her tag set creation, Sam commended the framework provided by the existing education tag set stating that 'the crucial things we're looking for you can still tag, feedback you know, collaboration they're all in there anyway' and 'you know in the sense of they are quite developmental as well around the things that you would want to talk to teachers about getting better at questioning is a great example (...) and that's highlighted in the app.'

Ease of video viewing

While the affordances of video viewing have been covered in previous sections, the tagging feature of VEO appeared to facilitate this process. Referring to his video observation experiences without VEO, Okan underlines the challenges he experienced as he evaluates it as problematic stating that 'going through one hour video without tagging like in VEO was a problem. So, there was this practical problem.' The tagging feature seems to have come as a solution to the practical problem mentioned as Ayla stated:

'VEO provide us to turn back to the specific moments with tags added. For this reason, there is no reason for a student to look severely to a video. Hence, we can save time by using this application'. This position was echoed by Sam as he stated he was 'a great fan' of the tagging feature as it 'does allow you to go to different parts of the lesson (...) as opposed to having to watch the whole thing accordingly'.

The ease of video viewing aspect that tags provided also increased the efficiency of feedback as the student teachers used the tags as talking points during the post-observation feedback meetings.

Extract 4.7 Gaye Post Observation Feedback Meeting / PR: Peer

124	PR:	let's see what else there is that I want to talk about
125		you
126		((they view a tagging))
127		hmm for example you went near the student to explain
128		something - good. Hmm look hah this is what I was going
129		to say, for example in your lesson when students started
130		to act out you immediately said shh shh and managed the
131		situation, I mean you had control. I'm thinking that both
132		you and I did better management wise

In the extract above in line 126 we see the student teachers view a tagged instance; this is after Gaye's peer wonders what else she wanted to mention during the feedback meeting. In line 128 she states 'this is what I was going to say' indicating that viewing the tag and watching the video helped jog her memory. Although it is the video itself that helps her remember, without the ease provided by the tags a moment like this is unlikely to happen as the trainee teachers usually do not have the time to watch the whole video.

Another data driven example of the tags in use is shown below as Eda's peer uses the tags to navigate the conversation and provide feedback to Eda. Lines 56 and 69 show the peer referring to specific instances:

Extract 4.8 Eda Post Observation Feedback Meeting / PR: Peer ED: Eda

56 06:18	
57 ((they view the tagging on VEO portal))	
also it's just you talking here, they're not doing	
59 anything	
60 ED: huh huh	
61 PR: they're not participating	
62 ED: I mean I did it a little bit like a story, like it was a	
written story and detective is searching and findin	g etc
64 that's why	
65 PR: you wanted them to listen	
66 ED: uh huh	
67 PR: maybe that's why they didn't participate like you s	said

68		err apart from that there is an explicit feedback tag at
69		09:02, your explicit feedback was quite a lot compared
70		to last time, you did good when giving feedback
71	ED:	uh huh
72		((they start to view the tagging on VEO portal))

Quick tag

The quick tag, which is a tag that allows the users to simply timestamp the video without having to select the relevant tag for the specific moment, was mentioned as one of the affordances of tagging. In fact, Sam went as far as to describe it as 'the most important one of all'. He supported this stance by referring to the simplicity of the quick tag and stated that once the specific classroom instance is tagged 'it allows you to just go back and jus- look at it with them and say what was that oh I know what that was it was- a, b, and c and that's- and it's all about the dialogue.'

While Sam valued the quick tag because his primary focus was the reflective dialogue after the observation rather than the tags themselves, the quick tag was also used to counteract any confusion experienced during live tagging. Referring to process of live tagging as 'quite demanding', Sam's solution was to 'just use the quick tag when you see something really specific that you like'.

The same tactic was employed by Selim's peer partner in the Turkish cohort as he reported his partner frequently using the quick tag due to feeling overwhelmed by the tagging choices and supporting this tagging with notes.

Flexibility of focus and timing

The tags' flexibility in terms of focus and timing were also mentioned as affordances. While Sam referred to the ability to create tag sets as 'it's wonderful that you can do that', Selim commented on the different tag set choices as one of the aspects he loved the most.

Another feature commented on by Selim was the retrospective tagging. This feature allows users to tag recorded videos retrospectively on the VEO web portal. Selim reported using this feature as a back-up for his live tagging. In moments when he found he could not keep up with observing the class and tagging, especially towards the end he states, he randomly

selected tags to simply timestamp the instance and then reviewed and corrected them on the web portal.

4.1.3 Practical elements

Practical features of how VEO was operated also came up as affordances. The first of these was the ease of sharing and viewing. Two of the observers provided comparative accounts of using VEO versus their past experience with video recorders. In addition to the previously mentioned challenge of having to review the whole lesson video for feedback, Okan underlined the difficulty of sharing large files. In a similar vein Iris stated that the VEO app was 'very useful' as users did not have to deal with converting file formats and uploading them onto a space. Referring to the practicality of the portal viewing system Batu stated 'when our teacher uploaded the video to the system, I could easily watch my lesson, see the problematic parts, and give feedback to myself' while also noting this experience was surprising for him as he had doubts about its effectiveness.

Another practical element of affordance was VEO's mobility due to its tablet platform. This affordance is directly linked to the way the UK high school teachers used VEO during observations to walk around the classroom and receive student feedback. This novel approach to observations would have been cumbersome without the mobility of VEO.

A final reference to VEO's practicality was in relation to how it saved time. Although this has been briefly covered in how the tags save time when viewing videos, the time saving element mentioned here is related to the app as a whole. Tom, who used VEO with his PGCE cohort, detailed how the PGCE lesson observations worked with and without VEO. He stated that for normal lesson observations the teacher trainers allocate four hours which covers travel, lesson observation, and debriefing time. Whereas if a regular lesson observation is carried out via VEO where the trainee teacher records themselves and tags and comments on their own lesson, the time required to review their comments and provide feedback would be up to two hours maximum. Looking at two hours saved per observation Tom emphasized that this was 'quite significant' for both costs for the university and workload of the lecturers.

This section summarized the affordances of VEO under three sub-themes as affordances of video, affordances of the tagging feature and practical elements.

4.2 Challenges with using VEO

Having discussed the affordances of VEO that emerged from the data in the previous section, this part of the analysis will examine the challenges with using VEO. Challenges were mentioned far less than the affordances, despite the participants being explicitly asked if they had any issues with using the app during interviews. The wording choice of the theme as 'challenges' rather than 'disadvantages' as the research question wording is deliberate. This is due to the observation that most of the issues discussed within this theme are considered with their possible work arounds and have not been portrayed as defects of the VEO app.

Having said that, the analysis of challenges should be interpreted with caution because of the nature of the data sources. The data was drawn from participant interviews and partially from reflective essays. The interviews were conducted with participants who were willing to make the time for this element of the data collection. Taking the Turkish cohort for instance, out of 19 trainee teachers only one of them agreed to do an interview. Likewise, the number of reflective essays that included comments on the VEO experience were approximately half of the whole data set. There might be a plethora of reasons why a research participant does not accept to do an interview, including lack of time, scheduling conflicts or simply a loss of interest in the research subject. While this is perfectly reasonable, the possible positive bias within the data collected should be acknowledged. Especially when the research focus is on the challenges/disadvantages associated with the use of a core element of the research.

Before moving onto the challenges with using VEO, there is a significant theme worth mentioning which is unwillingness to be on video. Teachers' reluctancy towards video observation came up in the interviews of the participants from the UK high school context. While discussing how they were incorporating VEO into their CPD programme, Matt pointed out 'a lot of teachers, their initial reaction is no I don't want to be filmed'. He linked this unwillingness to being 'very exposed' on video and underlined that watching yourself can become 'self-conscious'. Likewise, Sam detailed how they encouraged teachers to use video for CPD through walking them through their experience and underlining how it can be helpful. Yet he stated that 'inevitably some people are terrified of video and with the great suspect even though they're quite developmental will never necessarily want to jump into a

video.' While summarizing the teachers' engagement with VEO Sam stated 'we've had a couple of people who used it, couple of others have not really engaged with it despite probably willing to do so, but probably then thought oh oh I'm not quite ready for this'. It is important to acknowledge the apprehension teachers feel towards video observation, as it can possibly become a hindrance in the development of such practices, perhaps even more so than the challenges presented.

Moving onto the challenges with using VEO, one theme that emerged was the learning curve to use VEO. While it was not described as steep, the teachers did state it 'takes a bit of getting used to' (Kelly). Describing the process of introducing VEO to the teacher trainees, Okan stated that although the general response was fascination 'there was this level of slight anxiety in some of them'. Alongside the minor levels of anxiety, Okan also pointed out that some of the teachers 'had this question mark' thinking that 'that's a technological tool, is it complicated?'. Having said that, he did confirm that upon introduction even the doubtful students thought it was 'very practical and very useful'. Okan's description of VEO's first introduction is echoed by Selim, one of his practicum trainees. In the interview Selim stated that VEO appeared 'complicated' at first and he had worries about how they would use it. These worries subsided once they had a chance to play around with the app. A similar pattern was reiterated by Sam as he stated, 'you do get better actually around- the more you use it it's one of those things it's a great bit of technology around having to persevere with it, because once you've used it nu- numerous times you do get much better at moving between the tags.'

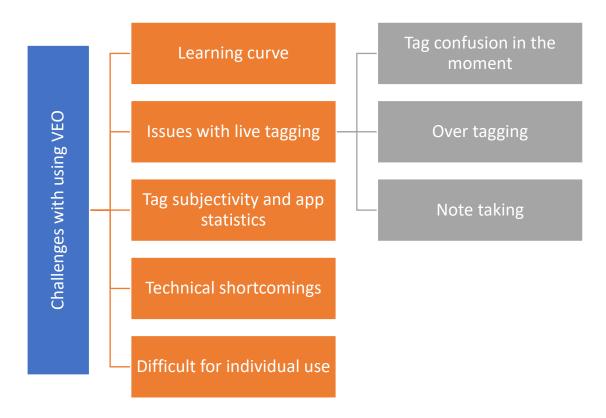


Figure 4.2 Challenges with using VEO

Another theme emerging was issues with live tagging. Matt for instance stated that live tagging while watching the lesson was an 'overload' for him, an issue that he solved by simply using the quick tag at any critical classroom moment. Sam on the other hand described the confusion he experienced with live tagging as a drawback and said:

'but do you know what? That is about the only drawback, I think sometimes it's a little confusing around the- the difference between some of the icons so like whawhen is it group work when is it whole class you know the peer, the self you end up a little bit getting confused of where should I be tagging this and then you forget oh god I'm still on teacher talk when I'm actually interested in this'

Just like Matt, Sam also found the solution in using the quick tag as he stated it 'actually solves that [tagging confusion] and do you know what? It might actually be sometimes easier just to use quick tag all the way through it'. The same tactic was employed by Selim's peer partner as previously mentioned under the quick tag theme. Selim also reported doing the same stating that 'because sometimes you look or maybe you don't remember where the tag was, which main tag it was under and such, so you just click on quick tag.'

Selim also described experiencing confusion with the rating attribute (+, ?, -) of the tags. When asked whether or not he made use of this feature he replied 'uh they kind of ended up just being positive positive-positive all of them, because we couldn't really understand it. Like when it's on negative does that add a bad meaning to it?' He later recalled that his practicum supervisor advised them to not get too hung up on using ratings and said that 'you miss the class when you are thinking should I choose negative or positive and that had an impact, so we didn't really pay attention to it and just clicked on positive.' To summarize it can be said that live tagging proved challenging for some of the participants, but they have come up with solutions that appeared to work for their context, mainly relying on the quick tag when tagging becomes too overwhelming.

The trap of over tagging also came up as an issue related to live tagging. This was not discussed as a challenge or disadvantage, but rather as a caveat of the tagging feature. Sam, for instance, stated 'one thing I've learned from using it now a lot is you can over tag, and it complicates the process.' Based on his experience he also said that 'the crucial advice I would always give new people to is to not over tag it.' In a similar vein when asked what changes he would make to the process of using VEO in a similar teacher training setting, Okan stated that one of the things he would do would be 'to narrow down the tag sets to certain tasks'.

The final challenge with live tagging is regarding note taking, another issue that Okan would like to improve upon as he remarked 'secondly um... find a more practical way to umm.. let's say to take notes while I am eheh while I am pushing tags'. Okan mentioned his struggle with note taking with VEO as he described how he used VEO within the trainee teacher practicum:

'what I did was after the class immediately I provided err some feedback using VEO and based on the notes that I took- because what I noticed was that VEO was not enough, after using VEO I don't know what like more than two hundred times basically I noticed that I had to take notes and then this is something that maybe producers may think about.'

Moving on, another sub theme emerging as a challenge of VEO was the subjectivity of tags and as a result the statistics produced by the app. The participants who commented on the

app statistics, Okan and Sam, both mentioned the drawbacks of it related to subjectivity. While Okan stated he sometimes had a look at the statistics he emphasized that they were not used for assessment purposes, rather they provided him with an overview of what tags the trainee teachers used during peer observation. Explaining why he did not make use of the statistics he emphasized his standpoint on teacher education and said 'I believe that it has to be more dialogic and qualitative'. Interestingly though, he contrasted his use of VEO within the practicum context with another context where teacher candidates were giving oral presentations and he stated that in the latter the statistics were useful. The interview extract below displays the section where the differences between the two contexts was explored:

OKN: rather than looking at the audience for example ermm and then in- in- in that ermm in that work I think statistics were very helpful simply because I was able to tag everything because they had these ten minutes presentations I could

INT: Hmmm

OKN: keep focused and then- then it becomes accurate err but then with- with teachers in training I didn't use the statistical aspects of VEO

INT: is- is that just because the classes were longer or also because er classroom context is much more complicated than a presentation context?

OKN: classroom context is much more complicated

OKN: Okan / INT: Interviewer

Again, referring to the complicated nature of the classroom context Okan stated 'I would take notes for example and when I'm taking notes then ten more things happening in that class'. This brings focus to the fast-paced environment in which teaching occurs and the argument is that it is quite difficult, if not impossible to tag every significant moment, which in turn results in unreliable statistics. Despite this point of view Okan suggested that the use of tags and statistics 'could be made more manageable' by decreasing the number of students the practicum supervisor has to overview.

While Okan reviewed the app statistics for a quick overview of the lesson; describing their use of it in the high school context Sam stated, 'to be honest we don't even look at them,

we just like the dialogue that it allows us to generate'. Responding to the interviewer comment on the subjectivity of the tags, Sam exemplified:

'and also they're wi- within the tags that you know w- w- you know you can almostone thing that someone might tag as feedback someone else might erm tag back as bridging you know they're- they're not necessarily as you say it's very subjective about what you decide something is and therefore different people will- will view those tags differently.'

Linking back to his preference to use the quick tag, Sam summarized his views on the app statistics by stating 'I'm not sure how valuable the graphs are, they're obviously quite-I like them but they're obviously quite limited in their sort of functionality you know (...) and therefore there is that question around how valuable is the data that it generates I don't know I rarely use it'. Overall, it can be commented that the complexity of tagging a lesson translated to unreliable statistics which the users only looked at to get an overall impression of the lesson, if at all. However, this was not discussed as an issue impacting VEO use, as both of the teachers who commented on this aspect made clear that their interests lie in the dialogue VEO allowed them to create not the statistics.

A couple of technical shortcomings of VEO also came up during the interviews. One of the shortcomings was regarding the features available on the app versus the web portal. Stating that he usually watches the videos on the app Matt suggested that having retrospective tagging capabilities within the app would be 'quite good'. Differing from Matt's app feature suggestion, Sam commented on the sound quality when VEO is used on an iPad:

INT: um any features of VEO that you like dislike or or wish they had built in? Because I get various responses to that one

SAM: I- yeah no the- I think the key one for me is maybe the sound quality always upsets me a little

INT: yeah

SAM: it just doesn-it's not-it's not loud enough when you play it back

Having said that Sam recognized that the issue with sound quality was related to limitations of the iPad and not necessarily the VEO app itself, but he still described it as 'probably the biggest drawback' detailing his view as 'there's sometimes there's lots of things you think "I

can't quite hear that" for the teacher's saying someone else is saying you really have to get quite skilled in standing and holding the pad quietly at people who are talking.' It should be noted here that the VEO web portal does allow for videos taken from various devices to be uploaded and tagged retrospectively; while opting for this can allow for videos with higher sound and image quality it does mean giving up on live tagging and the affordances of app mobility on a tablet. Thus, although there are options, it becomes a matter of deciding which features are more important.

A final sub theme in the challenges of using VEO is 'difficult for individual use'. The references for this theme came from one participant only, Selim, who mentioned it both in his reflective essay and during the interview. Summarizing his point, he wrote: 'Perhaps I could call one flaw about the VEO. If you are alone and you want to capture moment in your lesson, it could be really hard or costly.' Recalling his introduction to VEO, Selim said 'I noticed that it [observation with VEO] is a two-man job'. Referring to the practicum peer partnership context he used VEO in, Selim pointed out that 'if your peer doesn't know how to use VEO, then you can't get the benefits. Actually, it mostly depends on whoever is operating the tablet.' Having said that Selim also acknowledged the affordances of the VEO portal and stated that one could record, upload, and tag their own video, but he questioned whether or not this would be troublesome and cumbersome. When asked if he would rather use VEO with a colleague in the future or if recording and watching his own lessons would suffice, Selim responded:

'I mean frankly it would be easier and more practical with two people, like I said, but where are you going to find a partner at all times, I mean that is also an issue. Of course, if there's the chance the best way to do it is with a partner but it most likely won't be possible. Erm when there is no partner, I could probably record myself using a tripod but that might be troublesome. Still, it's better than nothing, I mean you would get to watch yourself and evaluate yourself.'

4.3 Emerging theme: the value of reflective dialogue

Referring to the difficulty of using VEO individually, Selim did not just include the practical aspects of the process, but he also discussed the importance of having a competent peer

partner. Stating that 'it [using VEO] doesn't work with individualism', Selim explained his stance on having a peer partner as below:

'the person evaluating you also needs to be competent, both in using the app and the content of the lesson. Erm I mean they need to know both English and the content of the lesson. For instance, I'm doing explaining there or repetition etc. but is the person recording me noticing this? I mean can they say, "you did this here" these are important points.'

From this extract and Selim's stance on using VEO individually, it can be inferred that he displays a preference towards engaging in reflective dialogue over individual reflection. This theme also became apparent in the UK high school context as the teachers there stated that they mostly used the quick tag because 'it is all about the dialogue'. The importance of reflective dialogue became apparent during James's interview as he described how Sam's feedback helped him shift his focus while watching his own teaching:

'so, using VEO, the first time I observed myself I said that my voice projection was strange and that I would go up and down in pitch, I would say the word okay too much. I hadn't noticed before, but my left hand just stays in my pocket throughout the lesson. I was looking towards the left side of the room too much, the timing was off and I moved around too much and that was what I thought the project was all about- to try to improve me as a teacher and what I was doing and what I was saying and- and Sam sort of said you're doing it wrong um these things which teachers do are just not that important whatsoever it's the- the quality of your activities and what you're trying to do with the students which was important. So, as I went through to the next one... I started changing the way I viewed the lesson, what I would note down and pick out. So, this time I was looking at how the pupils were engaged, the quality of the resources, I included a symbol story which I thought worked really well.'

This extract perfectly demonstrates the power of reflective dialogue. Despite the abovementioned affordances of viewing oneself on video, James describes his focus being stuck on superficial and almost trivial aspects of his teaching, down to how he kept his left hand in his pocket. Not only was he being critical towards himself for trivial matters like his pitch and where he glanced during the lesson, he also assumed that the purpose of the video observation process was for him to improve on these aspects he had noticed. This perspective shifted when Sam called him out on it and redirected his focus towards parts of his teaching that were of relevance, such as the quality of his activities and how the students engaged with the lesson. James reports a shift in his video viewing focus as a result of this redirection. It is hard to predict how James's video observation journey would have progressed without the impact of reflective dialogue and whether or not he would have eventually moved passed focusing on superficial aspects of his teaching in favour of more substantial aspects. However, it can be said that Sam's feedback accelerated this shift, possibly saving James from getting stuck in a counterproductive cycle of criticality.

Another participant that made her preference for reflective dialogue clear was Kelly. The way Kelly used VEO was self-directed with the assistance of the VEO Europa project research assistant. While the research assistant recorded Kelly's lessons via VEO, there were no feedback meetings afterwards. Referring to VEO process as well as the delayed lesson observation feedback structure of the DELTA, Kelly said:

'I guess I suppose the other thing that come- uh that is perhaps I'm not very good at reflecting just me. I think possibly I do like that dialogue with another professional uh who says why did you do that or could you have done it- so I- I wonder if for me that's what's missing a bit. I'm- I'm not particularly good at reflecting on my own practice in isolation maybe. So maybe if there were some opportunity to discuss it with someone else at some point would be good.'

Here Kelly both identifies her difficulties with engaging in individual reflection and emphasizes feeling the lack of reflective dialogue.

As a result, through the whole data set, the various contexts, and the different uses of VEO for professional development the importance and impact of reflective dialogue became apparent. While in some cases this was through the existence of it, in others it was through the absence.

4.4 Conclusion

To summarize, the thematic analysis showed that the challenges of using VEO were far less than its affordances. Additionally, where the challenges were related to the tagging feature the participants mentioned the solutions and work arounds they had found within their contexts. This generally involved using the quick tag feature, which was found useful as it allowed participants to bypass possible tagging issues while still having the opportunity to timestamp the video. Although participants reported struggle with tagging during live observation, this feature was also highly appreciated due to both its technical and pedagogical affordances. Technically, the tagging feature facilitated video viewing, which allowed the teachers to focus on relevant and important classroom instances while also saving time. Pedagogically, the framework provided by the chosen or created tag set lead to increased focus on areas of development during practice and served as guidance for further reflection. Alongside the affordances of the tagging feature, another major theme was the affordances of video. The findings from this theme confirmed the literature on video observation as the participants mentioned the power of self-observation in noticing their areas in need of development and the classroom instances that were missed amidst the chaos of teaching. The affordance of noticing was not limited to themselves as the video allowed them to observe their students from outside, and even get student feedback in one context where the observer interviewed pupils during observation. One final affordance of the video, and also the tagging feature, was the increased efficiency of feedback meetings. The existence of the lesson video removed the reliance on memory, which would have been the case for pen and paper observations, allowing the teachers to focus on detailed aspects of the lesson leading to a more fruitful reflective discussion. A notable theme that became apparent through the analysis, despite not being in the scope of affordances and challenges of VEO, was the power of reflective dialogue. Participants from various contexts described the impact of, displayed preference towards or felt the absence of reflective dialogue which brought together is a powerful exhibition of its effectiveness.

Chapter 5 The Process of VEO Use and Reflection

The second part of the analysis will examine VEO's use in pre-service and in-service contexts. Starting with the pre-service context the analysis will focus on two cases from the Turkish cohort: Lale and Selim. The analytical aim of the case studies is to answer the first two research questions of how VEO is used and to what extent it facilitates professional development, through providing a detailed analysis of their practicum with VEO experience. This will be followed by an account of how VEO was used in in-service contexts based on the data from participant interviews. Finally, the chapter will conclude with a brief comparison of how VEO was used for pre- and in-service reflective practices.

5.1 Pre-service VEO Use

5.1.1 Introduction

This section examines how two students (Lale and Selim) from the Turkish pre-service context used VEO for their reflective practices. Both were senior year students in an English Language Teaching programme at a top tier Turkish university and used VEO as part of their practicum course.

The pre-service students taught two lessons in a state secondary school as part of their practicum programme. Both lessons were taught to the same class of students approximately three-four weeks apart during the spring semester of the academic year 2016-2017. Lale and Selim were familiar with the students and their regular English teacher as they had been observing their lessons throughout the fall semester of their final year.

The practicum structure followed the general one outlined in methodology section (see Figure 3.1 and Figure 3.2). Thus, their first lesson was observed by their practicum supervisor and the second one by their peer partner. Both lessons were followed by a post observation feedback meeting. The pre-service teachers were given three tag sets to choose from when using VEO: the Language Learning and Teaching tag set (see Figure 3.3), the L2 Teacher tag set (see Figure 3.4) and the L2 Learner tag set. After the lessons and feedback meetings, the pre-service teachers were expected to write a reflective essay that incorporated their own reflections, the supervisor/peer feedback and VEO tags. The practicum cohort was also provided with a brief reflection guidance which listed areas to focus on in the reflective essays (see Appendix E).

To provide a detailed examination of how the pre-service teachers used VEO for reflective practices and professional development the case study analysis will begin with an overview of VEO use within the practicum through presenting details of lessons followed by VEO tag information. Following this, the second section of the case study analysis will bring together reflective essay data, post-observation meeting data and classroom transcripts to display the pre-service teachers' improvement throughout the practicum.

5.1.2 Case 1: Lale's Development of Classroom Management

Following the outlined practicum structure (see Figure 3.1 and Figure 3.2) Lale taught two lessons to a classroom she was familiar with through her lesson observations, with the first one observed by her supervisor and second by her peer partner. Both lessons were followed by a post observation feedback meeting. Lale's lessons were tagged with two different tag sets, presumably at her request as the students were allowed to choose from three tag sets available. Her first lesson was tagged with the L2 Teacher tag set (see Figure 3.4), which was specifically designed for use within the practicum programme alongside another one focusing on the learners called L2 Learner tag set. Her second lesson was tagged with the Language Learning and Teaching tag set (see Figure 3.3). Table 5.1 below provides an overview of Lale's practicum class, lessons, and reflections:

Table 5.1 Lale's Practicum Lessons and Reflections Summary		
Students' language level	A2	
Students' age	12-13	
Class size	18 students	
Lesson duration	40 minutes	

Lale's Practicum	Lesson 1	Lesson 2
Date	11.04.2017	02.05.2017
Lesson topic/objective	Superstitions	Environment/use of 'should'
Observer	Practicum supervisor	Peer partner
VEO tag set	L2 Teacher	Language Learning and Teaching
Post observation meeting	Yes – 15 minutes long	Yes – 6 minutes long
Reflective essay	Yes – 3529 words	Yes – 2928 words

An immediate observation of the information above is the length of Lale's reflective essays, for both her lessons she wrote approximately 3000-word reflections. Figure 6.1 and Table 5.2 below display a summary of VEO tag use and charts for Lale's lessons. As the tag sets were different it is not possible to present this data side by side and offer a comparison, thus the first lesson data will be presented first, followed by the second lesson data.

Lesson 1 VEO use and feedback

The table below (Table 5.2) reveals that almost half of the tags used for Lale's first lesson were under the Discipline main tag (10 out of 19). A quick look at the VEO stats bar chart confirms this and also shows that the negative evaluation of the tags was used the most. In this case the tag data is in line with the supervisor feedback, however it should be taken with caution as when asked about their VEO tag using experience the supervisor reported that it was difficult to click on the relevant positive/question mark/negative sections and thus they generally chose to simply focus on selecting the relevant tag. The advice to not focus on the evaluators (+/?/-) of the tags was also given to the trainee teachers.

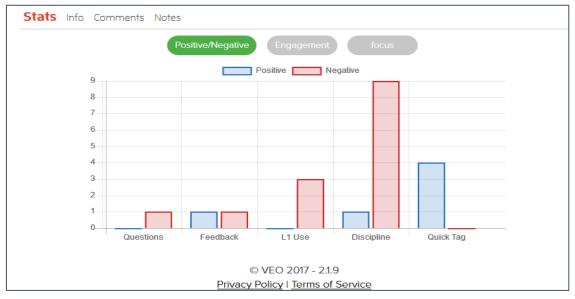


Figure 5.1 Lale Lesson 1 VEO tag chart

Table 5.2 Lale Lesson 1 VEO tag summary			
Tag Set: L2 Teacher			
Main tags	Lesson 1	%	
Sub tags	tags	/6	
L2 use	0	0%	
Accuracy	0	0%	
Fluency	0	0%	
Questions	1	5%	
Open Questions	1	5%	
Closed Questions	0	0%	
Feedback	2	11%	
Explicit	2	11%	
Implicit	0	0%	

L1 use	3	16%
On-Task	3	16%
Off-Task	0	0%
Discipline	10	53%
No Orientation	6	32%
Handling Time	0	0%
Handling Style	4	21%
Nonverbal	0	0%
Gestures	0	0%
Materials	0	0%
Quick tag	3	16%
Total number of tags	19	100%

With the Discipline main tag taking up almost half of the tags, some of the tags were not used at all (L2 use and nonverbal) with others only used once or twice (Questions and Feedback). In terms of frequency, the Discipline tag is followed by L1 use and Quick tag, both of which were used three times throughout the lesson.

Moving onto VEO use in and the content of the supervisor feedback meeting: the postobservation meeting starts off with the supervisor asking Lale what she loved most about
her lesson and things that she would do again in future lessons. While Lale answers with the
activity she enjoyed the most, she mentions a section of disruption during the lesson.

Picking up on this the supervisor steers the conversation towards classroom management
and starts viewing relevant VEO tags. The viewing starts by looking at the sections tagged as
'No orientation', a sub tag of Discipline. Instead of going through the tags one by one the
supervisor focuses on the Discipline tags and provides feedback on classroom management.

The dialogue includes drawing Lale's attention to classroom instances where she did not
orient towards disruptive student talk and giving advice on various classroom management
techniques that can be employed. Although classroom management was the main focus of
the post-observation meeting, the supervisor also touches upon activity and time
management as well as providing feedback in a way that allows for further learning
opportunities.

After the feedback meeting Lale wrote her first reflective essay. The essay which was quite long (3529 words) and detailed, focused on numerous aspects of teaching and was written in the following order with headings:

- 1. Lesson plan and classroom procedure
- 2. The successful and engaging part of the lesson
- 3. The problematic and not engaging part of the lesson
- 4. Usage of L1 by students
- 5. Questions
- 6. Feedback
- 7. Communication problems
- 8. Classroom management
- 9. Next class

The content follows the guidance provided for reflective writing closely (see Appendix E), which could explain the variety of focus despite the VEO tags and feedback meeting being heavily focused on classroom management and discipline. In her writing Lale frequently provided timestamps for whatever classroom instance she was writing about. The use of timestamps went far beyond the purpose of sign posting the instance for the reader to check with the video, with times included after each and every sentence in some instances:

'The instructions were clear. I told them in simple sentences like "We are going to listen a recording." (07:06). I tried to explain the pairs by pointing two students (07:26). Again, I showed two fingers and pointed at two students to be clear about pairs (07:46). But they started to talking when I tried to pair them and this led some confusion (08:06). When I showed the video with subtitles, I pointed out the bottom of the video to make them understand that there were subtitles (11:00).' (LR1)

In addition to the extensive use of timestamps, Lale also incorporated in the writing short direct quotes both from herself and her students while describing classroom instances. It is clear that the use of video recordings allowed for such a detailed account of the lesson, which otherwise would not have been possible.

The classroom instances Lale focused on were mostly organized according to the headings provided above, the structure did not follow a chronological order with instances from different phases of the lesson appearing consecutively. To further understand the

organizational structure of the essay, a timestamp comparison was carried out comparing the instances Lale included in the essay, the VEO tags and the instances discussed in the post-observation feedback meeting. This revealed that while some of tagged instances were included in the essay, others were not, implying a process of selection taking place by Lale. As she included numerous instances in her essay, there were a lot that were not tagged or mentioned by the supervisor, suggesting a viewing of the video independent of the VEO tags and supervisor feedback. Despite there being clear evidence of Lale reviewing her classroom video without the tags, an examination of the instance order revealed that where tagged instances were included, they were usually reflected on in a consecutive order. For instance, three of the Discipline tagged instances from different parts of the lesson were written consecutively in the essay.

In summary, for Lale's first lesson the focus of the VEO tags and the post-observation meeting was mostly on classroom management and discipline. The supervisor used the VEO tags as a starting point for further discussion on classroom management strategies and creating learning opportunities for students. He also advised Lale to focus on Discipline tagged instances, using the tags as further guidance for reflection. Lale wrote a highly detailed reflective essay, incorporating some of the tagged instances and many more that were not tagged. Her writing style displays she made great use of the video recording as she included numerous time stamps and quotes throughout the essay.

Lesson 2 VEO use and feedback

Lale's second lesson was observed and tagged by her peer partner. Differing from the first lesson they used the Language Learning and Teaching tag set (see Figure 3.3) which includes tags focused on both the teacher and the students. Table 5.3 and Figure 5.2 below show an overview of the VEO tags:

Table 5.3 Lale Lesson 2 VEO tag summary			
Tag Set: Language Learning and Teaching			
Main tags Lesson 2 %			
Sub tags	tags	/6	
Teacher L1 0 0%			
On-task	0	0%	
Off-task	0	0%	
Teacher focus 1 6%			

Form	0	0%
Meaning	1	6%
Management	0	0%
Materials	0	0%
Teacher initiation	0	0%
Open questions	0	0%
Closed questions	0	0%
Rapport	0	0%
Explaining	0	0%
Teacher feedback	7	39%
Implicit	7	39%
Explicit	0	0%
Student L1	2	11%
On task	2	11%
Off task	0	0%
Student initiation	0	0%
Topic change	0	0%
Questions	0	0%
Communication trouble	7	39%
Silence	2	11%
Miscommunication	3	17%
Claim lack of knowledge	2	11%
Unwillingness to participate	0	0%
Quick tag	1	6%
Total number of tags	18	100%

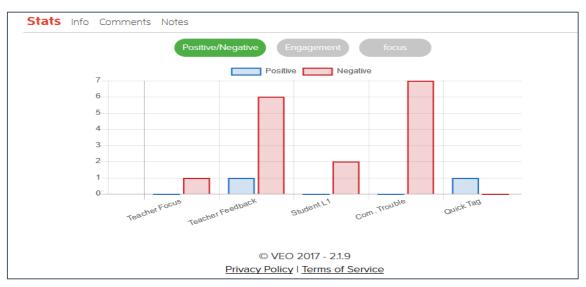


Figure 5.2 Lale Lesson 2 VEO tag chart

In the second lesson the most used tags were Feedback (7) and Communication trouble (7), which together made up the majority of the tags. Similar to the first lesson, the VEO tag statistics show these tags were mostly marked negative. The main tags Teacher L1, Teacher initiation and Student initiation were not used at all, while Teacher focus (1), Student L1 (2) and Quick tag (1) had a small number.

Similar to the supervisor feedback, the post-observation peer feedback meeting started with Lale's peer asking her what she liked about her second teaching experience. Differing from the supervisor feedback, the peer did not refer to or view VEO tagged instances while providing feedback. Unfortunately, the reason for this is not clear as the researcher was not able to establish contact with Lale or her peer for an interview on their VEO experience. Lale's peer gives her feedback on her instruction giving techniques, remarking that the students had difficulty understanding them. Starting off with a focus on instructions, the short feedback meeting touches upon communication troubles, student misunderstanding and activity design, all discussed as part of instruction issues. Lale's peer does not provide her with further guidance for reflection by telling her which tags to focus on, instead the feedback meeting ends by remarking that the lesson generally went well.

Despite the lack of focus on VEO tags in the relatively short feedback meeting, Lale produces another long reflective essay (2928 words) for her second teaching experience. Her organizational structure remains the same as her first reflective essay (see page 147) with the only difference being the last heading changed from 'Next class' to 'Future classes'. Her writing style remains the same with frequent use of timestamps and the classroom instances grouped under relevant headings. Lale appears to have taken a more independent route for her second reflection, only focusing on four of the peer tagged instances. This might be due to having different views on what is worth focusing on with her peer.

Overall, it appears that the VEO tags and feedback meeting had a greater influence on Lale's reflections for her first lesson rather than her second. One factor contributing to this might be the change in observer from supervisor to peer. Regardless of that Lale wrote highly detailed reflections after both of her lessons, focusing on a range of areas related to teaching. This section examined the VEO tag use by providing tag summaries for both lessons, looking at the use of tags during feedback meetings, and examining how the video, tags, feedback, and reflective guidance impacted the reflective writing. The next section will

examine Lale's evidence of development by looking at classroom interaction data, postobservation feedback meeting data and reflective essay data all together. Later on, section 6.1 examines Lale's reflective writing in further detail by looking at the quality and content of the reflective writing.

Evidence of development

Following the overview of VEO use, this next section will highlight Lale's development through the VEO-integrated practicum process by drawing from the analysis above and presenting relevant classroom extracts. The presentation will follow the practicum structure moving from Lale's first lesson to her second lesson, incorporating feedback meeting, VEO tag and reflective essay data where relevant.

The most prominent theme of Lale's supervisor feedback meeting was classroom management/discipline. This is in line with the literature on beginning teachers' areas of struggle (see Evertson and Weinstein, 2011; Jones, 2011). Excerpts 1 and 2 below show instances where this was outlined as an area to focus on by both the supervisor and the trainee herself.

Excerpt 1 Supervisor feedback meeting

S: Supervisor

T: Trainee

- 1 S: Let's see what do we have here?
- 2 (they start to view a tagging)
- 3 Here you're explaining something to this student, we lost the
- 4 students in the back.
- 5 The guys right now
- 6 T: Yes they were-
- 7 S: are talking loudly. The others can't even hear what this
- 8 student is saying err so it's no orientation, you're not
- 9 orienting to that side
- 10 (viewing tagging)
- 11 err
- 12 (viewing tagging)

here is the first time you're displaying orientation towards
the classroom management program err problem at the fourteenth
minute. I mean those ten- after the fifth minute in this six
minute long part the back of the class is a bit disrupted

In the above extract the supervisor is focusing on an instance where classroom management became an issue. This is done by incorporating the tagged VEO video into the feedback meeting and looking at instances tagged by the supervisor. In lines 7-8, the supervisor identifies the issue as the teacher showing no orientation towards the students who are talking loudly and disrupting the class. He then pinpoints the exact moment the teacher displayed orientation in line 13 and summarizes in lines 15-16 that there was a six-minute-long period of the class where management appeared to be an issue. Further into the meeting, Excerpt 2 comes where the supervisor is giving feedback on how to resolve classroom management issues (lines 7 to 10). The feedback is to start by using nonverbal actions such as gaze and proxemics, which are amongst the classroom management techniques termed as 'wordless interventions' by Scrivener (2012, p. 237) and 'signal and proximity interference' by Levin and Nolan (2014, p. 210). The supervisor offers a variety of options to take in a similar situation; this is important as Scrivener and Larrivee (2005; 2011) note that being an effective classroom manager comes from knowing the possible actions to take during any given classroom moment and being able to adapt according to the situation.

Towards the end of the feedback meeting, the supervisor advises Lale to look at all of the instances where classroom management related tags were used (lines 16 and 18). Following this in line 19 we see Lale agreeing with the supervisor and identifying classroom management as her biggest issue.

Excerpt 2 Supervisor feedback meeting

- 1 S: uh huh so at that point, somehow, before the 15th minute
- 2 T: uh huh
- 3 S: before you get to the point where you say guys, a slight
- 4 orientation towards him with body language, walking to that
- 5 side

6	T:	uh huh
7	S:	nonverbal at first, you can solve it with proxemics, with gaze
8		at first. Those are the first steps, if you notice those aren't
9		working you can adjust your voice a bit, slight raise of voice
10		while looking in their direction
11	T:	uh huh
12	S:	and it will most likely be resolved. In classes like these
13		it'll be resolved because once you engage them these kinds of
14		classes stay engaged and it mostly lasts until the end of the
15		class. We saw examples of it in previous lessons, so I'd say
16		check all of these parts
17	T:	yes
18	S:	related to classroom management
19	T:	that's my biggest issue

The summary of tag data produced by the VEO app is in line with the analysis of the feedback meeting, showing the Discipline tag as the most frequently used tag. As it was outlined in Table 5.2 the discipline main tag constituted 10 of the 19 total tags, with 6 of these tagged under no orientation and 4 under handling style.

The analysis of Lale's focus of reflection shows classroom management as a major theme in her reflective essays (see Section 6.1.2):

'Unfortunately, my classroom management was bad. I could not handle the classroom well. Students started to talk with each other. When I watched the video, I realized that there were noises most of the time. This caused some problems. We could not understand each other. Because of this, they did not understood my instruction for the poster activity.' (LR1)

In the extract above, Lale is seen identifying her classroom management as an issue and giving a general description of how the lesson went down in terms of management. In addition to general evaluations, she also provides detailed accounts of classroom instances related to management:

'I had to interrupt the lesson and say "Hush." or "Listen to me." all the time. I sometimes just said their names. When M1 was reading his sentences and M2 started to talk, I said "Hush." (23:14). When the guys at the back started to talk, I said "M1." with raising my voice (24:23). When posters were ready and a student from each group came to the board, there was noise (35:06). First I said "Guys." twice loudly. Then said "Listen, please." M1 was still talking so I said "M1, please." (LR1)

Although these reflections remained descriptive in terms of quality, the level of detail with the timestamps displays the effort she put into writing the reflections.

The extract below (see Table 5.4), displays one of the instances Lale referred to in her essay, alongside the classroom data transcription of the same instance.

Table 5.4 Lale's Lesson 1 Classroom Data and Reflective Essay Excerpt				
Classroo	om Data Transcript	Reflective Essay Excerpts		
02 T 03 04 S 05 T 06 07 S 08 T 09 10 S 11 S 12 T 13 14 15 16 17 18 (19 X 20	so fast [right?] :	'I played the video but I got the feeling that they still had some problems. I asked if it was fast and they said "Yes." so I decided to read it myself (13:36). At this time, a student came to the class and asked for one of the students (14:00). She said the name wrong and students started to laugh and talk. I tried to handle it but it seems that I failed. I said "Guys, please listen to me." and started to read but students still laughed and talked (14:12). At this part, I should have just be silent and wait until all of them stopped talking.' (LR1 7)		
_	S: hahahaha S: (unclear chatter)	tuiking. (EKI_/)		
25 T 26 27 SS 28 T 29 SS 30 T 31	S: chatter continues : you can have a party because it's a special occasion S: chatter continues : or just because S: chatter continues : guys (0.4) listen to me (0.2) you also have a party S: chatter continues	'The student on duty came to class and called for someone. Because she said the name wrong, students started to laugh and talk (14:10). First I said "Okay, listen to me." and then "Guys." twice but they did not stop. So I started to walk around and read it like that. That		

35	SS:	chatter continues	brought some silence to the lesson.'
36	T:	these are called party hats	(LR1 36)
37	SS:	chatter continues	(LN1_30)
38	T:	some people decorate with	
39		streamers and balloons	
40	40 T begins to walk around the class		
41	while	reading	
42	SS:	chatter continues	
43	T:	at some parties there is a	
44		cake (0.6) sometimes there are	
45		just snacks and drinks	
46			

Lale refers to the same instance in two separate parts of her reflective essay. This is a part of the lesson where she decides to adapt her listening activity. In addition to playing the audio multiple times, she decides to read the audio text herself, so the students have a chance to complete the activity, which is a fill-in-the-blank worksheet. In line 19 the lesson is interrupted by a student from another class asking for one of Lale's students, and the mispronunciation of the summoned student's name causes laughter in the classroom. The rest of the extract shows Lale's attempts at managing the class. In line 23 her first attempt at quieting the students down is seen, which is followed by her continuing with the task reading the listening text herself. This does not get the attention of those students who are still talking amongst themselves, which leads to Lale's second explicit attempt at managing the talk in line 30. It should be noted that, apart from two instances where she explicitly tries to quiet the students down, Lale's choice of action is to not orient to the talking students, and just to carry on with the task in hand. This results in Lale reading the text with no-one listening to her for several lines. She describes these explicit management attempts as unsuccessful in her reflective essay, stating: 'I tried to handle it but it seems that I failed.' She then continues to reflect on both what seemed to work: 'So I started to walk around and read it like that. That brought some silence to the lesson.' and possible future actions to take in a similar situation: 'At this part, I should have just be silent and wait until all of them stopped talking.'

Reflecting on other possible actions to take in a certain situation is a step forward in becoming a more effective teacher (Scrivener, 2005). In this instance, Lale hypothesises that getting the students silent before carrying on with the activity would have delivered better results. Indeed, ensuring student engagement prior to starting an activity is advised by teacher educators. Scrivener underlines the importance of this by stating 'an instruction

given over student chatter, or when students are looking the other way, stands little chance of working.' (2005, p. 92).

Plans for change

In addition to reflecting on her first teaching, Lale's reflective essay also included reflections on what kind of future action she could take in order to improve her practice:

'I realized so many mistakes I did during that lesson while I was watching the video. Actually, when I finished the lesson, I thought that lesson went well. After I had a small talk with my teacher, I understood that there was something that needs to be improved. This became more clear when I watched the video several times.

The first thing that I wish I had done was to disband the guys that sit at the back. They talk with each other and they distracted one another's attention. The noise that they caused got other students' attention and they started to talk as well.

The ongoing noise was my fault. At the beginning; they did not talk that much but because I did not interfere with their talking, they started to talk more and more. That was because I do not like to be a despotic teacher and also because they were middle schoolers and I did not want to break their hearts or make them sad.' (LR1)

In the extract above, Lale mentions how the feedback meeting and watching herself on video contributed to her understanding of the areas of her teaching that needed improvement. She demonstrates the ability to step back and consider the possible reasons for the disruption and states that it was due to her lack of interference. She then explains her own reasoning for her choice of action. Nevertheless, the area of classroom management remains one to be improved upon for her future lessons.

Lesson 2

For her second lesson, Lale produced another long reflective essay using the same headings as the first one. The thematic analysis of this essay showed that the most prominent theme had shifted from classroom management to questioning strategies, followed by feedback and correction as the second most important theme. This can be due to Lale seeing classroom management as an improved area of her practice, thus, removing the need to reflect on it in the same length and depth as the first lesson.

As previously mentioned, in order to be able to look at any evidence of development, the focus will be kept the same as the first lesson, despite classroom management not being the primary theme of the second reflective essay.

Table 5.5 below, displays a classroom management instance that Lale reflected on in two separate parts of her essay, and the transcript of the corresponding instance. In this extract Lale is trying to set up a task for which she has given the instructions, and as she moves on to distributing the worksheets, one student says they do not understand what is to be done.

Clas	sroom	Data Transcript	Reflective Essay Excerpts
01	s3:	hocam ben anlamadım	'After I gave the
02		(teacher I didn't understand)	instructions, I distributed
03	T:	just a minute	the worksheets. One of the
04	0.4	(T distributes worksheets)	
05 06	S4:	<pre>dağıtıyım mi hocam? (should I pass them out teacher?)</pre>	students said "Hocam, ben
07	T:	to you- and you. You didn't	anlamadım!" (Teacher I
08	1.	understand? Just wait just wait	didn't understand) (22:04). I
09	ss:	(unclear chatter while receiving	waited until all students got
10	~~.	worksheets)	their papers and clapped my
11	T:	okay	
12	SS:	(unclear chatter while receiving	hands and said "Everyone!"
13		worksheets)	to get their attention
14	Т:	guys	because they started to talk
15	SS:	(unclear chatter while receiving	(22:34). They did not stop
16		worksheets)	,
17	T:	okay	talking so I said one of the
18	SS:	(unclear chatter while receiving	students' name so that to
19		worksheets)	stop them talking. I gave a
20 21	T: SS:	(claps her hands to get attention) (unclear chatter)	task to the student who
22	T:	shhh Murat! Please. Berke can you	seemed to talk more. I said
23	1.	please go there?	
24	S5:	hocam gelmesin yapmayın ya	"Murat, can you read the
25	55.	(teacher don't make him come)	example?" (23:33).'
26	S6:	zaten yeri orası hocam	
27		(that's his seat anyway)	'My students did not
28	T:	shhh okay go there	understand from the first
29	SS:	(unclear chatter)	
30	S:	please hold the line	example so I tried to explain
31	Т:	yes please hold the line ay okay	the second one (24:36).
32		Berke quickly. Now guys look at your	When some students
33		paper, look at your paper. Look at	understand but some did
34		your paper. Look.	not I said "You can help
35	S:	yes	·
36 37	T:	good now there are two sentences.	your friends." (26:58). Some
37 38		Like for every picture you will write two sentences	noise occurred but it is okay
30 39	s:	(unclear)	since this is a language
40	T:	yes you will write two sentences	classroom.'

```
41
    S:
           should shouldn't (unclear chatter
42
           continues)
43
    T:
           yeah like er like in the first pi-
44
           look at the example
45
           please Murat can you read the
46
           example? Read, read the example
47
    M:
           tamam hocam (okay teacher)
48
```

In the essay extracts Lale reflects on the instance by listing the different actions she took in order to manage the disruption, the step by step walk through of a problem-solving sequence was coded at the Dialogic level of the reflective framework. In contrast to the first lesson, where she continued with the task instructions despite the lack of engagement, in this lesson she takes the time to get the students' attention. At first, she uses verbal cues saying 'okay' and 'guys' to get them quiet (lines 11, 14, 18). Seeing this does not work, she resorts to using gestures and claps to get their attention. This also does not seem to quiet the students down, which then leads Lale to switch strategies and call out an individual student who is talking (line 23). Looking at the classroom extract, this seems to give her some space to continue with the task and repeat the instructions, so everyone is clear on what to do. However, some level of chatter is still continuing (line 43) and this is when Lale appoints a student to read the example (line 46-47). She describes this choice of action in her reflective essay by stating that 'I gave a task to the student who seemed to talk more. I said "Murat, can you read the example?" (23:33).'

In the second part of the essay extract, she elaborates on the various methods she employed to manage the class and the confusion relating to the instructions. These included verbal cues, gestures and giving a task to the disruptive student (Lewis, 2002; Scrivener, 2005). She concludes by showing an understanding of differentiating between types of student talk during the lesson, stating that 'Some noise occurred but it is okay since this is a language classroom.' This statement could also be seen as a shift in Lale's mindset regarding student talk; where in her first lesson essay she extensively reflected on how student talk disrupted the lesson, in her second one she displays the ability identify and separate acceptable student talk within the context of her language classroom.

Reflections on self-improvement

Lale reflects on the area she identified as the most problematic below:

'My classroom management was better than the last time. I am pleased that it developed. The only part it get bad was the last part because of the instructions. Another minor mistake was that when I tried to open the slides, there was a silence (00:22). Maybe, I could have given them a small task or asked a question while I was doing that. Apart from these, the management was good.' (LR2)

While stating that her classroom management has improved, she mentions the above extract as the only instance where it did not go well. Despite being identified as a part that 'got bad', the lesson excerpt shows Lale taking an active stance in classroom management by trying out several solutions to resolve the issue, in essence 'remaining fluid' as Larrivee (2011, p. 990) puts it.

Reflecting on the whole practicum process, Lale notes that VEO allowed her to notice 'minor' aspects of her teaching that would have otherwise gone unnoticed:

'After the lessons, I usually realize the huge mistakes I do. But minor mistakes always are overlooked. This opportunity helped me realize those and I actually tried to do my best for the second lesson. I tried to not do the same mistakes. It helped me to develop my classroom management which was bad during the first lesson.' (LR2)

She emphasizes the improvement in her classroom management skills and largely attributes this to the video reflection process underlining the replay affordance of video recordings:

'All in all, this lesson was more successful than the previous one. This was mostly because I wrote a reflection and watched my lesson again and again. I tried to be careful to not to make same mistakes and it actually worked. In the future, I will try to do this time to time to reflect upon my teaching. This way I can see the parts that is good and the parts that needs developing or fixing. I want to know how my skills are. I hope they will get better.' (LR2)

Possibly due to the effectiveness of this process, we see Lale viewing reflection as a window into her own practice and making plans to incorporate it in her professional development in the future.

Conclusion

To summarize, this section showed that reflecting using VEO helped the pre-service teacher reflect in a dialogic manner in multiple ways. First of all, the tags helped the supervisor narrow the focus of the post-observation meeting (focusing on discipline tagged instances) thus literally shaping the dialogue. The tags shaping reflection continued in the reflective writing with Lale grouping the same tagged instances. Second, the tags were also used as further guidance by the supervisor, thus extending their assistance for individual reflection. Finally, the existence of video allowed Lale to broaden her scope and focus on non-tagged instances of the lesson as well. Following this process, the evidence of development section shows Lale taking a more dialogic stance in her reflections regarding classroom management, thus supporting the argument that reflecting with VEO can help teachers reflect in a more dialogic manner — both in the sense of dialogue between two people and in the sense of taking a step back and mulling over options. Lale's development of classroom management also shows that VEO supported reflection can lead to improvement of teaching skills as well.

5.1.3 Case 2: Selim's Development of Feedback Practices

Introduction

The second case study focuses on Selim, another pre-service teacher from the Turkish cohort. His case was chosen as it is contrastive with Lale's case in terms of reflection focus and style. Including two differing cases allows for a presentation that shows the range of VEO use and practice improvement. Selim was also the only participant in the Turkish cohort that agreed to do an interview on his VEO experience. This factor contributed to the case selection as the additional data provided both a voice to the participant regarding his experience and further richness to the case overall.

Aiming to provide a detailed examination of how Selim used VEO for reflective practices and to what extent VEO supported these practices, the case analysis will start with providing background information on Selim, including his views on technology use, self-observation, and his initial reaction to VEO. Drawing from interview data, this section aims to provide an understanding of Selim as a teacher and his stance on the research subject. This will then be followed by an examination of how VEO was used within the practicum, presenting an

overview of Selim's practicum lessons, VEO tag information, and a comparison of tagged classroom instances with feedback meeting and reflective essay content. Lastly, the case study will be finalized with an examination of improvement and professional development.

Background

Selim was a senior year pre-service teacher in an English Language Teaching programme at a top tier Turkish university. He was highly interested in the professional development with VEO project and was one of the few participants willing to join the initial longitudinal version of this study. Despite his willingness to continue to use VEO as part of the research, organizational restrictions prevented him from doing so as after graduation he started working at a military school where the use of any form of recording device in the classroom was prohibited. Although he was unable to participate in the study further, he agreed to participate in an interview to discuss his experience with VEO in the practicum, which took place in December 2017 approximately six months after his graduation.

Selim described himself as a big supporter of technology in the classroom despite not being able to use it much in his job placement at the time. Mentioning a game-based learning platform he used during his undergraduate programme, Selim views technology as essential and remarks:

'...in the 21st century teaching techniques are built upon it [technology use] and if you don't keep up you fall behind, that's something to keep in mind. (...) After a certain point you always repeat yourself or become traditional. (...) then you become outdated...' (SInt)

Moving onto using technology for self-observation, Selim's only previous experience with video self-observation was recording in-class presentations as part of one of his undergraduate modules. He was then asked to write a reflection on his presentation to complete the task. Reflecting on his experiences, he emphasized the affordances of video in terms of noticing and positively remarked 'I think everyone should do it' (SInt). Commenting on video observation for professional development he said, 'I think that is really important, all teachers should be constantly checking themselves; I mean this system should be in place, I think it is necessary' (SInt).

Selim reported feeling excited when VEO was first introduced to his practicum group and detailing his initial reaction he said: 'knowing that I would use something like that excited me. Recording myself and using the tags and other features, all of that made it a motivating start to the practicum.' (SInt). In addition to the excitement Selim also reported that VEO 'felt a bit complicated at first' (SInt) in terms of how they would actually use it in the class and learning to use the tags.

Overall Selim had a positive approach to technology and self-reflection and was highly motivated to use VEO during the practicum.

VEO use for lesson observations

Within the practicum programme Selim taught two lessons in a state secondary school. The lessons took place with the same class of students, a month apart in the spring semester of the academic year 2016-2017. As part of the first phase of the practicum, Selim and his peer partner had observed the same class of students several times during the fall semester, thus they were familiar with both the teaching style of the class's regular teacher and with the students.

Following the practicum structure outlined in Figure 3.1, Selim's first lesson was observed by his practicum supervisor and his second lesson was observed by his peer partner. Both lessons were tagged with the Language Learning and Teaching tag set using VEO (see Figure 3.3). Selim reported that while he chose the tag sets for observation, the tags were not narrowed down further to select a specific observational focus. The lessons were followed by a post observation feedback meeting after which Selim wrote a reflective essay in line with the reflection guidance (see Appendix E), incorporating the post observation meeting feedback and VEO tags. Table 5.6 below displays Selim's practicum class profile and an overview of his practicum lessons and reflections:

Table 5.6 Selim's Practicum Lessons and Reflections Summary				
Class Profile				
Students' language level A2				
Students' age	13-14			
Class size	15 students			
Lesson duration	40 minutes			

Selim's Practicum	Lesson 1	Lesson 2
Date	11.04.2017	10.05.2017
Lesson objective	Grammar	Vocabulary
Observer	Practicum supervisor	Peer partner
VEO tag set	Language Learning and	Language Learning and
	Teaching	Teaching
Post observation meeting	Yes – 16 minutes long	Yes – 10 minutes long
Reflective essay	Yes – 2320 words	Yes – 1273 words

Table 5.7 below shows the distribution of VEO tags used during Selim's lessons and Figures Figure 5.3 Figure 5.4 display a bar chart view of the tag use produced by the VEO app. Since the same tag set was used in both lessons, the data is presented side by side with percentages. However, it should be noted that the tag data from the two lessons cannot be used to draw comparisons of Selim's performance as the tagging was done by different observers: the practicum supervisor for the first lesson and Selim's peer partner for the second. Nevertheless, observations regarding VEO tag set use can still be made. The first lesson has 36 tagged instances, while this number is 23 for the second lesson. In both lessons the main tag Teacher Initiation has been used the most, which can also be observed in the bar charts. This is followed by the main tag Teacher Focus for the first lesson and Quick Tag for the second lesson. The Student Initiation main tag with the sub-tags of Topic Change and Questions have not been used at all in both lessons. 73% of the first lessons tags came from the teacher related side of the tag set, this percentage is 43% for the second

lesson however taking into account the high percentage of quick tag use (22%) the focus on student related tags still remains low. Thus, it can be said that the VEO tags were mostly concentrated on teacher related tags, which is reasonable due to the context of the study.

Table 5.7 Selim Practicum lessons VEO tag summary						
Tag Set: Language Learning and Teaching						
Main tags Sub tags	Lesson 1 tags	%	Lesson 2 tags	%		
Teacher L1	1	3%	0	0%		
On-task	1	3%	0	0%		
Off-task	0	0%	0	0%		
Teacher focus	8	22%	3	13%		
Form	2	6%	0	0%		
Meaning	1	3%	2	9%		
Management	5	14%	1	4%		
Materials	0	0%	0	0%		
Teacher initiation	11	31%	6	26%		
Open questions	5	14%	2	9%		
Closed questions	2	6%	0	0%		
Rapport	0	0%	0	0%		
Explaining	4	11%	4	17%		
Teacher feedback	6	17%	1	4%		
Implicit	3	8%	1	4%		
Explicit	3	8%	0	0%		
Student L1	5	14%	4	17%		
On task	5	14%	3	13%		
Off task	0	0%	1	4%		
Student initiation	0	0%	0	0%		
Topic change	0	0%	0	0%		
Questions	0	0%	0	0%		

Communication trouble	4	11%	4	17%
Silence	1	3%	1	4%
Miscommunication	0	0%	1	4%
Claim lack of knowledge	3	8%	1	4%
Unwillingness to participate	0	0%	1	4%
Quick tag	1	3%	5	22%
Total number of tags	36	100%	23	100%

Looking at the bar charts (FiguresFigure 5.3 and Figure 5.4) it is seen that the tags were mainly marked positive. This is especially true for Selim's second lesson as his peer partner only marked one instance under the communication trouble tag as negative. Similarly in his first lesson, the highest number of negatively marked tags are under communication trouble. Although these observations are made, as it was mentioned in Lale's case analysis the supervisor reported not placing too much emphasis on the tag evaluators and advising his students to do the same. An additional issue with these evaluators is linked to the tag names, for instances the tag communication trouble is already skewed negative due to the



Figure 5.3 Selim Lesson 1 VEO tag chart

tag name.

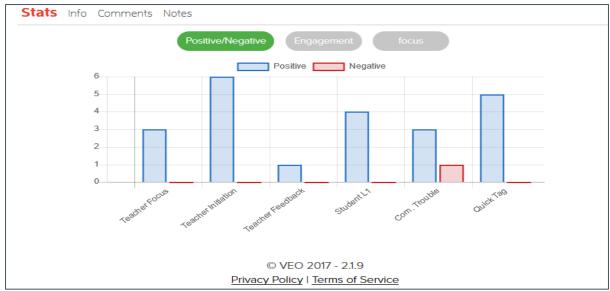


Figure 5.4 Selim Lesson 2 VEO tag chart

Thus, it can be expected that an instance tagged with communication trouble would be evaluated with the negative marker. Experiencing confusion with how to tag certain classroom instances and the use of the evaluators as well as the subjectivity of tags were reported amongst the challenges of using VEO as presented in section 4.2. Thus, it is not possible to make any inferences based on tag marker use given that the participants reported both experiencing confusion with it and not paying much attention to which evaluator (+/-/?) they chose in the first place.

VEO use post teaching experience

VEO was used as a point of reference during both feedback meetings, after briefly asking Selim's thoughts on the lesson both the supervisor and peer partner clicked on tagged instances, watched the instance with Selim and gave relevant feedback.

Looking at lesson 1 feedback, 12 of the tags were referred to and the supervisor based his feedback on the reviewing of these tags. It should be noted that each tag does not necessarily correspond to a specific classroom instance, a single instance could have been tagged with multiple different tags only minutes or even seconds apart. Stating the number of tags is to give an overall impression only. Having said that, looking at the total number of tags only one third was reviewed during the feedback meeting. The supervisor ended the meeting by giving Selim a roadmap for the tags he should focus on. Referring to

communication trouble instances he said: 'also these kinds of issues you will have all the time, you asked several students, did not get any answers, they don't want to talk, you can check those instances throughout the lesson' (SSF).

After the feedback meeting, Selim had several resources to draw upon while reflecting on his lesson, these included his own reflections, the supervisor/peer feedback and the VEO tags. The structure of the reflective essays was examined to further understand how VEO was used for reflections.

Selim's first reflective essay was 2320 words long and focused on several classroom instances. The essay followed the general structure below:

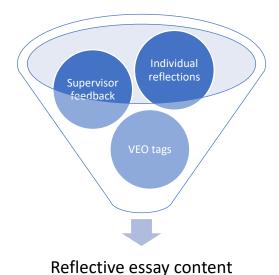
- General information on lesson topic and plan
- Brief overall evaluation of lesson
- Successful segments
- Problematic segments
- Student use of L1
- Questioning techniques
- Feedback techniques
- Communication troubles
- Classroom management
- Areas of improvement for next class

This structure follows the critical reflection writing guidance provided by the practicum supervisor (see Appendix E) and touches upon all the content in the guidance. Selim uses time stamps to mark the instances he is reflecting on in the essay, using signposting phrases such as: 'I would like to refer a moment at 00:50' (SR1) 'Also at 01:27' (SR1) 'Another problematic issue about my teaching practice can be seen at 10:30' (SR1). In total he mentions 23 specific instances from his first lesson. These instances were not reflected upon in chronological order, in fact in some cases Selim brings together, links, or contrasts multiple instances that took place during different phases of the lesson. Comparing the VEO tags and Selim's reflections it is seen that some of the consecutive instances were tagged with the same main tag. Possibly suggesting that while reflecting, Selim made use of VEO's viewing function that allows users to see all the tagged instances under the overarching main tag. This assumption is corroborated with interview data, when asked how he viewed

the VEO tagged video for reflection Selim stated that he watched the whole lesson from start to end once and then made use of the tags to view specific instances:

'They [the tags] made it easier. Straight away I would say there is something here let me check that. For instance, there's lack of knowledge there let me check that or I did explaining let me check that or say there's repetition let me check and see what I did there. Since it was so practical, I could go through it quickly.' (SInt)

To further understand which resources Selim drew from while writing his reflective essay, a timestamp comparison was carried out comparing the VEO tagged instances, the instances discussed during the post-observation feedback meeting, and those that were included in the reflective essay. The findings showed that Selim made use of all of the resources, see Figure 5.5 for a visualization and the bullet pointed summary below:



- Figure 5.5 Resources for Selim's reflective essays
 - Not every tag was discussed in the supervisor feedback meeting
 - The trainee wrote about instances that did not come up during the feedback meeting
 - The trainee wrote about instances that were not tagged in the VEO video
 - The trainee did not write about some of the instances that were both tagged and discussed in the supervisor feedback meeting

The diagram below (Figure 5.6) provides a visualization of the overlap with the numbers referring to the timestamped instances:

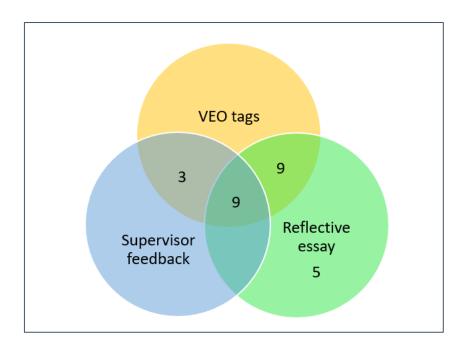


Figure 5.6 Overlap of tags, feedback, and written reflection

To summarize the supervisor feedback acted as a springboard and provided Selim with a roadmap for individual reflection with the assistance of the VEO tags. Selim both reflected on several tagged and discussed classroom instances and some that were not tagged or discussed, displaying autonomy.

The feedback meeting of and reflective essay for Selim's second lesson slightly differs from the first. The most obvious observation to make is the shorter duration of the post-observation meeting and the shorter length of the reflective essay. Similar to the feedback meeting with his supervisor, the peer feedback meeting starts with an overview of the lesson with Selim detailing his evaluation of his own teaching. This is then followed by a chronological viewing of VEO tags and the peer partner providing relevant feedback. Half of the tags and related instances were reviewed during the meeting, interestingly none of the quick tags were included in this review. Unlike the supervisor feedback meeting this one did not end with tag suggestions for Selim to review on his own. Rather the feedback was concluded by his peer partner congratulating Selim on a job well done and wishing him continued success. This difference in style can be explained by the difference between the supervisor-trainee teacher and peer partner-trainee teacher relationship. Another possible explanation is that the second teaching was the last of the practicum process, presumably meaning that the trainee's next teaching experience would be in their future job placement.

Selim's second reflective essay following this feedback meeting is much shorter than his first and the structure differs slightly:

- General information on lesson topic and plan
- Brief overall evaluation of lesson with comparison to first lesson
- Successful segments
- Student use of L1
- Questioning techniques
- Classroom management
- Overview of VEO experience

There are two observations to make regarding the overall content of the essays: firstly, due to this being his second lesson a comparative element has been included and secondly there is no writing on problematic segments or areas of improvement. A possible explanation for this might be the trainee teacher viewing the second feedback meeting and reflective essay as a 'wrap up' of the practicum experience. Thus, the issues in the first lesson were addressed and the reflection was concluded with an overview of the experience in general.

Despite the lower number of classroom instances included in reflection, and the lack of further reflection guidance from his peer partner; just like the first reflective essay Selim reflected on tagged and non-tagged instances. An interesting difference in his style of writing is that in the second essay the classroom instances were reflected on in a chronological order.

This section examined how VEO was used in the practicum: focusing on the tag use, how VEO and the tags were incorporated into the feedback meetings and how all of these resources came together in the reflective writings. The next section will focus of Selim's evidence of development bringing together classroom, post-observation feedback meeting and reflective essay data.

Evidence of development

Following an in-depth analysis of Selim's VEO use within the practicum, this next section will highlight Selim's development throughout the practicum experience in relation to feedback practices. Feedback practices was chosen as the focus as it repeatedly came up throughout the process in both the post-observation meetings and the reflective essays. Despite the

emphasis put on Selim's feedback practices, the focus for development choice was not as streamlined as Lale's with feedback not being the most frequently used tag (see Figure 5.3).

Selim's post-observation meeting with his practicum supervisor covered a range of topics including Selim's feedback practices. The supervisor started viewing the feedback related instances by stating 'But first for example occasionally there were some student mistakes, how did you handle those for instance?' (SSF). Excerpt 3 below displays a section of the supervisory meeting where they focus on a specific classroom instance relating to feedback.

Excerpt 3 Supervisor feedback meeting

SUP: Supervisor

SEL: Selim

1	SUP:	() Also for example this nine now student C erm she gives an answer to
2		the question you asked, let's see how she responds
3		((they view the tagging))
4	SEL:	I said "post office" (post ofi/ʃ:/) hehe
5	SUP:	now here a delicate situation took place. Some students were laughing I think
6	SEL:	yes
7	SUP:	in fact, here you kind of made the psychologically correct move, you did not
8		leave the student high and dry at the board because you also noticed the
9		others were laughing
10	SEL:	huh huh
11	SUP:	probably there ermm well done you gave positive feedback, that's right I
12		think. Managing the situation this way was right due to the mocking attitude
13		of the others
14		((they continue to watch the tagging))
15		this is the point the student said conjunction
16		((viewing tagging))
17		now up until this point you managed this delicate situation well. You didn't
18		correct the student right there and then. But here, now, in the next moments
19		there needs to be a process of learning. In the end this was a

20 mispronunciation, the others laughed but they still did not hear the correct 21 form 22 SEL: repeat... 23 SUP: you said it once, you could have gotten the student to repeat slowly for example. Because this happened a couple times- I mean you pronounce it 24 25 correctly that is good err but... SEL: 26 I should have made her repeat 27 SUP: ask the student herself and listen, this is important because did she learn the correct pronunciation? 28 SEL: 29 huh right 30 SUP: because this is where you can assess yourself as a teacher as well (...)

The instance mentioned in the above excerpt is an implicit feedback instance in response to a student's mispronunciation. Student C responds to Selim's question but mispronounces the word 'post office'. This leads to the other students laughing, which the supervisor describes as a 'delicate situation' (line 5). He then continues to evaluate Selim's choice of feedback strategy while simultaneously reviewing the tagged video recording (lines 7-17). The supervisor remarks that Selim's choice of positive feedback was 'right' and the 'psychologically correct move'. Despite the positive evaluation the supervisor moves onto emphasize the absence of uptake by the student, stating that 'there needs to be a process of learning' (line 19). Observing that Selim provided the correct pronunciation in the form of a recast but did not ask Student C to produce the correct form, the supervisor underlines the importance of hearing the student produce the correct pronunciation by posing the question 'this is important because did she learn the correct pronunciation?' (lines 27-28). The supervisor continues to emphasize his point by reviewing another feedback instance in Excerpt 4 below, where Selim provides positive feedback and does not get the correct form from the student.

Excerpt 4 Supervisor feedback meeting

SUP: Supervisor

SEL: Selim

31 **SUP:** (...) for example this erm... let me see... for example at minute twenty-five

32 there is an example with Student D 33 ((they view the tagging including Student D's instance)) 34 now before this Student D pronounced the word in an extremely wrong way SEL: 35 yes SUP: 36 now what causes confusion here is if you do not get the student to repeat the 37 correct pronunciation, the student might assume their pronunciation was correct. Because after that you say 'good job' 'very good'. In fact, there is an 38 39 article on this by a researcher called Hansun Waring, arguing that teachers 40 constantly saying 'very good' can actually hinder learning opportunities. It's 41 a good article, I recommend you read it they've analysed a classroom 42 interaction. You can get the correct form from the student because this 43 activity wasn't a speaking fluency-based activity. It was essentially based on 44 exercises in general. So, every now and then giving feedback explicitly, 45 repeating the correct form and getting the student to repeat as well... You 46 don't necessarily have to say 'you pronounced it the wrong way' but you 47 repeat the correct form, that is good. Get the correct form from the student 48 as well so they understand which part was wrong. This way you can also 49 understand if the student learned or not.

Lines 36-49 show the detailed feedback given by the supervisor on the topic of feedback practices. Here he outlines some of the drawbacks of positive feedback, provides further reading for Selim, and emphasizes that explicit forms of feedback are appropriate when the activity is not a fluency-based one (lines 42-43). He concludes this section by once again underlining the importance of eliciting the correct form from the student stating that this allows the student to understand where their error was, and it gives the teacher a chance to check student understanding (lines 48-49). The supervisor's advice here is backed by research on recasts as 'the corrective intent of recasts may be ambiguous because of their multiple discoursal functions' (Loewen, 2012, p. 27). Studies show that output-prompting forms of corrective feedback are more likely to lead to student uptake and recasts that are made more explicit by adding stress are more likely to be picked up by students as corrections (Panova and Lyster, 2002).

Thus, overall while Selim's supervisor commended his feedback practices in some instances, he heavily emphasized the importance of checking student learning as a vital part of providing feedback. Stating that Selim's first practicum teaching was 'a good lesson' the supervisor advised him to 'focus on the feedback practices' for his individual reflection.

Looking at the VEO tag data for Selim's first lesson (see Table 5.7) it can be seen that Teacher Feedback was not the most frequently used tag. Rather it was the third, after Teacher initiation the most frequent (31%) and Teacher focus the second (22%). Despite not being the primary focus within the VEO tags, the timestamp comparison analysis revealed that feedback practices were indeed the primary focus of the post-observation meeting. As previously mentioned, Selim's supervisor reviewed 12 of the tags while giving feedback and one thirds of those belonged to the Teacher feedback main tag which displays the emphasis placed on Selim's feedback practices.

In line with the post-observation meeting, Selim focused on feedback strategies in his first reflective essay and the thematic analysis revealed it to be the most heavily focused sub theme under the main theme of teaching strategies. In doing so Selim provided numerous examples and reflected on both successful and problematic feedback sequences. One instance referred to in the post-observation meeting proved to be significant (see Excerpt 3) as Selim mentioned it in three separate sections of his first reflective essay. The table below (see Table 5.8) displays a transcript of this instance alongside Selim's reflections on it.

The transcript in Error! Reference source not found. depicts a question-answer and feedback instance between Selim and Cece (Student C). Also discussed during the supervisor post-observation meeting (see Excerpt 3), the transcript begins with Selim asking for another example sentence from the students (lines 1-2). The aim of this lesson was to introduce and practice the use of the conjunction 'to' within the context of public buildings (bakery, school, post office, etc.). After an initial activity of checking students' background knowledge of vocabulary related to public buildings, Selim introduces the conjunction 'to' and asks the students for example sentences. After getting responses from a couple of students and getting them to write their sentences on the board, the transcribed instance begins. In line 11 Cece starts to read out her sentence however she mispronounces the word post office ending it with a 'sh' sound rather than a 's' sound. As Cece completes her sentence in line 13, her talk is overlapped with another student imitating Cece's

mispronunciation and laughing (line 14). This is followed by Selim prompting Cece to repeat the ending of her sentence by saying 'to?', presumably because he could not hear her, after which both Cece and Selim complete the sentence in an overlapping manner. Up until this point Selim keeps his interaction only with Cece, not orienting to the student who repeated her mispronunciation. He continues to do so in lines 19-20 as he repeats Cece's example sentence while also providing the correct pronunciation of office – employing a form of corrective feedback called recast (Lyster and Ranta, 1997; Loewen, 2012).

Table 5.8 Selim's Lesson 1 Classroom Data and Reflective Essay Excerpt						
Classroom Data Transcript T: Teacher (Selim) / C: Cece / Sx: unidentified students	Reflective Essay Excerpts					
T: Teacher (Selim) / C: Cece / Sx: unidentified students 01 T: err so (0.3) let's write one 02 more example (0.7) yes err 03 what is [your na]me? 04 C: [Cece] huh Cece 05 T: Cece (0.3) gel (come) 06 (inaudible) [gel] (come) 07 C: [err] (0.7) 08 söyleyeyim mi? (should I say it?) 09 T: yes of course 11 C: err he goes to the- to (0.2) 12 post office / 'pf.ɪʃ/ to 13 [send letters] 14 S2: [post office / 'pf.ɪʃ/] heheh 15 T: to? 16 C: send [letters] 17 T: [send le]tters 18 C: [uh huh] 19 T: [he goes] to the post office 20 (0.4) to send [letters] 21 Sx: office / 'pf.ɪʃ/ heh 22 C: [letters] 23 T: okay you are right can you write 24 this for me? (0.3) Cece? (0.3) 25 well done 26 C: I don't know how to spell 27 Sx: hah office / 'pf.ɪ ʃ/ 28 Ss: hehe 29 Ss: (unclear talk) 30 (1.5) (Cece walks to the board to 31 write the sentence) 32 T: good job Cece 33 Sx: unclear) 34 (Cece continues to write the sentence 35 on the board and T monitors both her 36 and the class) 37 T: okay so here which one is 38 conjunction?	'If we move forward to 09:23 we face with a delicate situation there. My students Cece mispronounced the "post office" and some of her friends started chuckling. This could've demoralize Cece and discourage her future attentive actions to the course. I tried to prevent this inconvenience by ignoring the giggling and without breaking the communication bond between me and Cece I gave positive feedback. Then I listened to her and asked her to write her sentence on board. I think that was a morally good action but slightly remained weak at method.' (SR1_9) 'Another problematic issue about my teaching practice can be seen at 10:30. At that period, Cece said her sentence aloud and mispronounced on word which is "office". Her friends started to giggle but I ignored them not to demoralize Cece and continued with her sentence, I wanted to write that sentence on the board and implicitly repeated "post office" 2-3 times. Everything until that moment was okay but after having Cece seated, I did not try to receive any feedbacks from her. That was a mistake I had done. I did not check if a learning process occurred or not.' (SR1_13)					

'Most obvious feedback session in my teaching practice was at around 09:20 when I failed to receive feedback in a proper way. At that point, as I stated before I gave necessary corrections about Cece's mistake but afterwards I did not try to receive any feedbacks. That was a mistake and even now I do not know if Cece could pronounce the word "office" correctly or not.' (SR1_18)

Selim using recast as the corrective feedback strategy is not surprising as multiple studies have shown recasts to be the most common feedback method in classrooms (Lyster and Ranta, 1997; Panova and Lyster, 2002; Loewen and Philp, 2006). This finding is also echoed in Öztürk's (2016) study examining oral corrective feedback in the Turkish context. Selim's recast is not followed by an uptake by Cece – a move in line with research findings as Lyster and Ranta (1997, p. 54) noted that recast 'is the least likely to lead to uptake of any kind'.

As Selim invites Cece to the board for her to write the sentence (lines 23-24), in lines 21, 27 and 28 students continue to laugh and mock Cece's mispronunciation. Selim keeps only communicating with Cece and gives her positive feedback saying 'well done' (line 25) and 'good job' (line 32). The transcribed sequence ends when Selim asks Cece to identify the conjunction in the sentence, after which he moves on to the next planned activity.

Selim's reflections on this instance can be seen in the reflective essay excerpts column of Table 5.8. Starting off by describing it as a 'delicate situation' in the first segment, Selim explains how he handled the situation and states that he ignored the laughing students in order not to further demoralize Cece. He also underlines giving Cece positive feedback with the intention of preventing possible discouragement – a stance supported in pedagogical theory as the affective support positive feedback provides to learners is seen as an important aspect (Ellis, 2009). Selim concludes this segment by evaluating his actions as 'morally good action but slightly remained weak at method' (SR1_9). In the following segments he moves beyond this and identifies a 'mistake' he made – namely not checking 'if a learning process occurred or not' (SR1_13). The influence of the supervisor feedback on Selim is greatly visible in the third segment as he reiterates the mistake he made and concludes 'even now I do not know if Cece could pronounce the word "office" correctly or

not.' (SR1_18). To summarize, in these segments, all coded as Dialogic, Selim reflects on this feedback instance by providing reasoning for his actions, taking into account Cece's feelings and future motivation towards the lesson, evaluating his actions from a 'moral' stance as well as a pedagogic view and identifying his shortcomings by emphasizing the absence of successful uptake.

Plans for change

At the end of his first reflective essay Selim identified areas for improvement/change for his next lesson. Outlining three areas to work on as feedback check methods, better communication strategies with lower-level students and increasing interactivity within the lesson; Selim placed the biggest emphasis on feedback check methods:

'First thing that I would change in my next classroom is certainly feedback check methods. I think that was the biggest mistake I did in my last lesson. A teacher must know if the learning process was successful or not in order to completely finish his/her teaching process.' (SR1 24)

Although he does not outline a concrete plan for change, the extract above underlines the importance he places on checking learning/understanding as he states this is the way to determine the success of a teaching process.

Lesson 2

Selim's second reflective essay following his second teaching practice was much shorter than the first and slightly differed in content. The most important difference to mention here is that the second essay did not have an explicit focus on feedback strategies, rather it was briefly discussed in relation to the first lesson.

Table 5.9 below shows Selim's reflection on an instance of checking student learning and the classroom data transcription of the corresponding instance. The classroom extract is from a vocabulary presentation activity at the beginning of the lesson. Selim had a presentation of pictures relating to the environment and the process for this section of the lesson was to show students the picture, elicit responses to try and get the corresponding vocabulary item, introduce the word to the students and explain its meaning. Coming after the first two pictures of the presentation (environment, sea pollution) the extract begins as

Selim starts to introduce the third word 'deforestation' while still trying to elicit it from the students by giving them the first syllable (lines 1-6). He gives them the full word in line 7 and explains it as cutting down trees in lines 9-10.

This is followed by a check of understanding in lines 13 to 21 as Selim asks if deforestation is good or bad. At line 22 it can be seen that he moves onto the next picture, then pauses and asks the students to repeat the word 'deforestation' after him. The rest of the extract displays Selim getting the whole class to repeat the word with more and more students joining in and ends with him giving positive feedback.

Selim describes this instance as 'successful' in his reflective essay and reflects back on his first lesson stating that he 'failed many times in checking learning process'. He refers to this instance as an example of the increased attention he placed on improving checking student learning.

It is important to note that this instance does not have the same focus as the checking learning/feedback instance Selim reflected on after his first lesson. The focus of the first instance was on checking learning after a feedback sequence, thus essentially checking the effectiveness of feedback. Whereas this instance is related to vocabulary presentation and pronunciation drilling – not providing feedback. Thus, although Selim reflects on it as a 'checking learning' sequence it is more of a presentation/teaching sequence as the new vocabulary item is just being introduced to the students.

Nevertheless an analysis of Selim's second teaching showed that there were numerous instances where Selim did not move on with topic continuation without getting learner uptake (Lyster and Ranta, 1997). These instances were found during the worksheet answer checking phase of the lesson. Selim gave the students a worksheet of fill in the blank sentences where the students had to choose the correct vocabulary item to fill in the blank out of two options. The classroom extract below shows the interaction between Selim and Cece as Cece answers the last question of the exercise:

Table	Table 5.10 Selim Lesson 2 Extract 2							
T: Teacher (Selim) / C: Cece / Sx: unidentified students								
01	Т:	so number eight (0.8) yes Cece						
02	(0.7)							
03	C:	you should recycle if you want to help (0.2) err the						
04		(0.4) envirmint? /in.va/maint/						
05	T:	<pre>environment /in'vai.rən.mənt/</pre>						
06	C:	eheh						
07	T:	environment /in'vai.rən.mənt/ okay repeat environment						
08		/in'vai.rən.mənt/						

```
O9 C: environment /In'var.rən.mənt/
10 T: good job okay you should recycle if you want to help
11 environment
12 Sx: geri dönüşüm (recycle)
13 T: yeah (0.2) yes you should recycle it's good for the
14 planet good job guys you did great- a- a good job
```

In lines 3-4 Cece reads out her answer, however at the end of sentence she displays some hesitation regarding pronunciation of the word 'environment'. This can be seen both from the pauses prior to finishing the sentence and her upwards intonation as she tries to pronounce the word. Following Cece's mispronunciation, Selim repeats the word in the correct pronunciation in line 5 employing a form of recast by focusing on the single word (Lyster and Ranta, 1997). Looking at line 6, Selim's recast is not followed by successful uptake which is when the learner either repairs the linguistic feature or shows understanding of the correction (Ellis, Basturkmen and Loewen, 2001). Rather Cece simply chuckles as a response, a discourse move that would be categorized as 'needs repair' by Lyster and Ranta (1997). Following this, Selim repeats the word one more time and explicitly asks for Cece to repeat after him (line 7). In line 9 Cece is seen producing the correct pronunciation, after which Selim provides positive feedback, followed by a recast of the whole sentence and continuation of the topic. This instance shows Selim making sure 'the learning process was successful' (SR1_24) and working on what he identified as his 'biggest mistake' in his first lesson. There are several other instances during the worksheet answer checking phase where Selim employs a range of feedback practices. In some instances, he provides partial or full recast followed by an immediate request for learner repetition in the absence of uptake. In others he provides recast, focuses on meaning of the sentence asking questions on relevant vocabulary items and then circles back to getting the students to repeat the correct pronunciation of the word, making it a more delayed form of explicit feedback. In all cases he made sure to hear the correct pronunciation of the word from the students.

The significance of uptake is seen as a contentious issue (Lyster, Saito and Sato, 2013), Sheen (2006, p. 368) summarizes it well stating: 'while successful uptake can be considered to provide evidence of noticing, the reverse does not necessarily hold true – learners may notice the corrected form even if they do not uptake it'. Ellis et al. (2001, p. 286) emphasize

the difference between noticing and acquiring stating that successful uptake 'does not indicate that the feature has been acquired.' Based on this and taking into account the fact that recasts 'do not necessarily require student responses' (Panova and Lyster, 2002, p. 591), checking learning in the absence of successful uptake appears to be a good way of confirming noticing. However, emphasizing that uptake is an optional discourse move (Ellis, Basturkmen and Loewen, 2001) Ellis (2009, p. 14) advises that 'the teacher should not require the learner to produce the correct form.' Nevertheless some scholars acknowledge that repetition of recast can have its benefits as it allows the learner to practice producing the correct form (Lyster and Ranta, 1997; Panova and Lyster, 2002; Swain, 2005). This can be assumed to be the case especially when the correction focus is pronunciation – as it is in Selim's case. To sum up, although research argues that output-prompting forms of corrective feedback (such as elicitation, repetition) are preferable due to their higher effectiveness (Ellis, 2009), Selim's shift from moving on with topic continuation in the case of no uptake to noticing the lack of successful uptake and acting on it, is still significant. This is an improvement in the sense that it both shows Selim taking on supervisory advice and displays his increased focus on student learning.

Reflections on self-improvement

Although Selim only briefly focused on his feedback practices in the second reflective essay, the analysis of his teaching revealed that he had indeed improved his practices in accordance with his supervisor's feedback. Providing an overall evaluation of his second practicum lesson Selim stated:

'Overall, I find my second intern teaching practice quite successful. I think that teaching vocabulary played the biggest role in that. In my opinion, variations in teaching vocabulary are wider than in teaching grammar.' (SR2_14).

Finding his teaching quite successful Selim also remarked on his improvement stating:

'I think my problem with feedback, and checking learning process is solved in this practice.' (SR2_15)

The analysis of Selim's lesson corroborates his statement as the improvement Selim displayed in checking learning processes is evident in his second lesson (see Table 5.9). Selim

concluded his second reflective essay by reflecting on the whole practicum process with VEO. Stating that the incorporation of VEO was a 'great advantage' Selim emphasized the affordance it presented for self-evaluation:

'I look forward more teaching opportunities as I graduate from university. Especially using such a great application as "VEO" is a great advantage in such cases. The best thing about these teaching processes was being able to carry out our jobs and evaluate ourselves thanks to VEO. I think that improving our teaching standards in accordance with developing technology is a great occasion for us. I believe that I will continue to use this or another application that would help me to see my cons and pros during my teaching practice.' (SR2_16)

The impact of using VEO within the practicum also emerged from the interview that took place approximately six months after graduation as Selim recounted the instance with Cece in his first lesson:

Excerpt 5 Selim Interview

SEL: erm I remember that well, there was a girl called Cece in my class erm at some point erm she came to the board erm mispronounced a word

INT: hmhm

SEL: her friends laughed a bit but I- I mean I didn't do great, erm I did okay but after getting her to sit down I did not get any feedback from her

INT: hmm

SEL: for instance, the first thing my supervisor noticed- that was the first thing he said erm for instance you should have gotten feedback I mean check if the student learned, do they know the correct pronunciation you don't know

INT: hmm

SEL: so, I got to exactly see that I ermm didn't do that. Then when I watched it I saw it actually happened. I already wrote about this in the self-reflection.

In this extract Selim reflected on how the combination of supervisor feedback and selfobservation via video helped him fully understand and acknowledge the classroom instance as he remarked 'I saw it actually happened'. Further in the interview he reflected on his improvement throughout the practicum:

Excerpt 6 Selim Interview

INT: Did you notice any areas for improvement as you watched your own performance?

SEL: yes I did erm for example that repetition-

INT: the Cece instance right?

SEL: instance I had shortcomings in giving feedback- I mean getting feedback

INT: hmhm

SEL: this happened in my first-first video erm I concentrated on this a bit more

INT: hmhm

SEL: I even wrote it in my reflection saying I think I improved in this area a bit because I checked err when a student said something wrong for example when they made a pronunciation error there were moments where I asked them to repeat the correct pronunciation after I corrected them

INT: hmhm

SEL: erm it allowed me to see that

To summarize, the evidence of development section detailed Selim's improvement in feedback practices drawing from supervisor post-observation meeting, reflective essays, classroom video and interview data. Selim is shown taking on his supervisor's advice to check for learning after feedback sequences and employing it successfully in multiple instances in his second teaching. These instances were not mentioned in Selim's second reflective essay. A potential explanation to this might be Selim's view that this issue was solved, thus perhaps not warranting further reflection. Despite the absence of focus on feedback strategies in the second reflective essay, the interview data shows the lasting impact of this process as Selim recounts the first lesson instance he reflected on and mentions how he improved in that area.

Conclusion

To summarize, looking at the VEO use in Selim's practicum experience showed that in both of his lessons the tags were mainly focused on the teacher. When providing feedback both his supervisor and peer partner integrated VEO and showed Selim instances they tagged followed by providing relevant feedback. However, while the supervisor structured the discussion around specific tags and advised Selim to focus on certain tags during his individual reflection thus extending his guidance, the peer partner viewed the tags

chronologically and did not provide any further guidance. Examination of Selim's writing structure showed that he used time stamps from the lesson video to signpost classroom instances and much like the supervisor feedback discussion his first essay showed Selim bringing together, linking, or contrasting multiple instances that took place during different phases of the lesson. A triangulation of the VEO tags and the instances Selim reflected on displayed that some of the instances brought together were tagged with the same main tag. This suggests Selim using VEO's tag viewing function for his self-video analysis which was corroborated with interview data.

Timestamp comparison of VEO tags, supervisor feedback, and reflective essay instances showed that Selim reflected on both instances that were tagged and came up during the post-observation meeting; but he also reflected on different instances indicating his autonomy in the reflection process. This is significant as it shows Selim genuinely and independently engaging in self-reflection and not simply writing about supervisor feedback to have completed the task.

Selim shows ability to reflect dialogically in both of his essays, this is strengthened by the use of VEO tags as he was able to compare and contrast different classroom instances with the video itself allowing him to take a step back and observe his teaching as an outsider. As a result of the VEO integrated reflection process Selim shows improvement in his feedback strategies which was the area he focused on the most in his first reflective essay.

5.2 In-service VEO Use

Following the focus on pre-service teachers' VEO use, this section will now look into inservice teachers' VEO use. However, as mentioned in the methodology section the data collected from the in-service teachers is unfortunately limited to interviews only. This limitation means that an analysis of used tags or reflection is not possible beyond participants' reports.

Data will be drawn from the VEO experiences of four in-service teachers: Kelly, James, Matt, and Sam (see Table 3.2). Out of these four, three participants (Kelly, James and Matt) had their lessons observed, while Sam acted in the role of the observer.

5.2.1 Kelly

Kelly, an ESOL tutor to adults at the time, used VEO as part of her DELTA module two training. As part of her module requirements, she had to record and watch herself teaching a lesson and write a reflection on it. She integrated VEO into this process with the assistance of the VEO Europa UK research assistant. Her process of VEO use included creating a specialized tag set based on DELTA course observation guidelines. She used this tag set to record three lessons over the course of seven months, during which she focused on changing her error correction practices. Details of her case can be found in Seedhouse and Whelan's VEO book chapter (2022), thus a further analysis of her improvement in error correction practices will not be included here. Instead interview data will be used to focus on her process of using VEO.

Talking about her experience with VEO using an individualized tag set, Kelly states:

'having knowing what the tags were made me conscious or I tried to consciously focus on those areas. So in some sense I suppose it's perhaps a bit more powerful than just having areas to work on that someone writes about and then says I hope they're gonna focus on the next time they're in the room as opposed to someone actually with those areas of focus tagged and pressing them that's a bit more of a sort of umm- there's a bit more of a definite follow up then potentially isn't there I suppose.'

Here she mentions how the tags provided a guideline both for herself and for the observer. Having the specific tags set out allowed her to consciously think of those areas during the lesson and knowing that the observer was focused on the same tags increased the potential of discussing those specific areas in the post-observation meeting or when receiving feedback. Asked how it made her feel knowing the specific tags Kelly said, 'I think it makes me realize that there are still areas for development (...) it makes you a bit more accountable maybe.'

Speaking of VEO use in class Kelly mentioned how important for her it was for both her and her students to be comfortable with the existence of the camera in class: 'I remember the first few lessons I was quite conscious of them. You're being videoed but it is the back of

their head.' She goes onto mention that the learners were not fazed by the camera and that made her more comfortable.

Moving onto discussing her post-VEO recording experience, Kelly states her preference for reflective dialogue as mentioned in section 4.3:

'I guess I suppose the other thing that come- uh that is perhaps I'm not very good at reflecting just me. I think possibly I do like that dialogue with another professional uh who says why did you do that or could you have done it- so I- I wonder if for me that's what's missing a bit. I'm- I'm not particularly good at reflecting on my own practice in isolation maybe. So maybe if there were some opportunity to discuss it with someone else at some point would be good.'

Here Kelly says that her preferred version of reflection is one that involves collaboration and dialogue. This was not really possible in the DELTA setting as she had to reflect individually first and she received feedback from her tutor on her lesson video and reflections a week later. She further expands on her point by saying 'I suppose ideally what would've happened is if me and the other people on my DELTA course had all done this. And then we'd maybe watched each other's because we were all teaching in different places.'

5.2.2 James, Matt, and Sam

The second in-service context is from a UK high school. James, Matt and Sam integrated VEO into their existing continuous professional development lesson observations. Sam, the deputy head teacher, had the role of the observer and observed classes of both James, a geography teacher, and Matt, a science teacher. Their case is unique due to the different observation technique Sam used (previously mentioned in section 4.1.1). While Kelly was worried that the recording might disrupt the students, Sam took another approach and made full use of the tablet's mobility. He would start off the lesson like a classic observation, seated somewhere in the back of the class and recording from there. As the lesson progressed into activities, pair work or group work Sam would walk around the room and sit next to different groups of students recording how exactly they carried out the given activities. He took this focus one step further by even asking the students various questions from checking their understanding to asking their opinions on the activities. Sam underlines

the effectiveness of engaging with students while recording with the instance described below that took place after observing a lesson of science teacher Matt:

'this is the real power of it because I'd listen to the lesson and I asked him [the student] what's transfer, then he says I don't know whereas he [Matt, the teacher] just assumed he did know that, and when he watched the video he was like Christ just didn't know what transfer is! I'm just teaching it as if they still all know what transfers are and they don't and that prompts- (...) and something as specific as that you can see now that Matt now knows they don't know it'

Sam's intervention with VEO allowed Matt to see clearly the discrepancy between what he thought the student's understood and what they actually understood. This approach that is focused on uncovering the student voice is more focused on student learning which benefits both the students and the teacher.

An anecdote from James, the geography teacher, showed that this approach did not just uncover the mismatch in knowledge, but also provided an opportunity to find out students' thoughts on the activities they do:

'he [Sam, the observer] would ask them [the students] for their opinions and it's interesting to hear their perspective on activities and sometimes you'll organize an activity in a certain way because you want to get something out of it and the pupils often recognize that and it was really quite rewarding when they would say how positively they viewed the lesson what they were doing what they were learning and normally you never hear that you never get that feedback'

Moving onto the VEO tag use in this context, the first thing to mention is Sam's commendation of the VEO education tag set: 'the crucial things we're looking for you can still tag, feedback you know, collaboration they're all in there anyway' and 'you know in the sense of they are quite developmental as well around the things that you would want to talk to teachers about getting better at questioning is a great example (...) and that's highlighted in the app.' Having said that it should be noted that Sam also emphasized that the quick tag was 'the most important one of all'. This is because he mentioned the complexities of finding the right tag to use during filming while also walking around and asking students

relevant questions. In that state the quick tag came in quite handy as it allowed for him to bookmark the video and move on.

Having discussed how the high school teachers used VEO in the classroom, the next section is on what they did with the VEO recordings after. Unlike the pre-service cohort and Kelly, these teachers did not watch their VEO recorded lessons and write reflections. Instead, the recordings were primarily used as a springboard for dialogic reflection. Having the stance that 'it's all about the dialogue' the teachers found that the dialogic reflection was fruitful both for the observer and the observee. In James' case, he described how Sam's feedback helped him shift his focus while watching his own teaching in this excerpt previously used in section 4.3:

'so using VEO, the first time I observed myself I said that my voice projection was strange and that I would go up and down in pitch, I would say the word okay too much. I hadn't noticed before, but my left hand just stays in my pocket throughout the lesson. I was looking towards the left side of the room too much, the timing was off and I moved around too much and that was what I thought the project was all about- to try to improve me as a teacher and what I was doing and what I was saying and- and Sam sort of said you're doing it wrong um these things which teachers do are just not that important whatsoever it's the- the quality of your activities and what you're trying to do with the students which was important. So, as I went through to the next one... I started changing the way I viewed the lesson, what I would note down and pick out. So, this time I was looking at how the pupils were engaged, the quality of the resources, I included a symbol story which I thought worked really well.'

Having the video to watch back not only helped teachers notice more relevant aspects of their teaching but also relieved the pressure on the teachers to remember the critical moments of the lesson. Matt recounts his experience of using VEO as an observer and states that 'it changed the dynamics of the lesson debrief'. Further expanding on this he states:

'Usually it would be done in my office you'd have the piece of paper in front of you and as I say it would be a two way conversation but it was very much saying this is what I liked about your lesson and then you know can you remember doing that or

you might remember this and eheh the best thing I find for this is when you're writing it up often it's you know two or three days after you actually saw the lesson you watch the video and then it all comes flooding back erm rather than trying to look at your notes and piece together what actually happened.'

5.3 Comparison of Pre- and In-service VEO Use

Comparing how the pre- and in-service teachers used VEO it is difficult to make a clear-cut differentiation in its use as there are some areas that are common some that are not. For instance, in terms of tag use the way the pre-service teachers and Kelly used the tags is quite similar as in both cases specialized tag sets were created for their use. Whereas the UK high school context did not really make use of the specific tags apart from using the quick tag as a video marker.

It can be said that the groups that used specialized tag sets were more guided in their reflections as both parties mentioned knowing the tags increasing their focus on the specific teaching skills. In the case of the pre-service teachers this guidance extended to their reflective writing as they referred to the tagged instances in their essays.

In both the pre-service context and the UK high school context there was a focus on dialogic reflection with the VEO recorded lesson being incorporated into the post-observation feedback meetings. This was done more systematically in the pre-service context as the practicum supervisor started the feedback meetings by looking at the most used tags and instructed the pre-service teachers to look at the rest when they were doing their individual reflection. Whereas in the in-service context most of the tagging was done to bookmark the video thus the observer went over all of the tagged instances in the feedback meeting. The reason for this difference might also be due to the time affordances each group had; as the pre-service feedback meetings lasted 10-15 minutes which did not give much time to go over all of the tags, whereas the in-service teachers had more time to delve into dialogic reflection. Although Kelly did not have a dialogic element in her use of VEO she did mention feeling the lack of it. Stating that she would prefer being in dialogue with another professional to having to reflect individually.

In any case integrating VEO into lesson observations helped both pre- and in-service teachers improve their reflections and/or teaching skills. For Lale, improvement was seen in

her classroom management skills, for Selim it was in his feedback practices and for Kelly it was in her error correction (Seedhouse and Whelan, 2022). As for Matt and James, VEO helped them realize certain aspects of their lessons they otherwise would not be aware of and also the dialogic quality of the reflection guided them towards the more relevant aspects of their teaching to reflect on rather than the superficial.

5.4 Conclusion

To summarize, looking at the process of VEO use in both pre- and in-service contexts it can be said while it is difficult to make a clear-cut differentiation of its use, there are more commonalities than there are differences. Firstly, all teachers in the process benefited from the use of VEO whether it was apparent in their teaching or reflection skills. Secondly, all teachers underlined the benefit of being in dialogue with a peer or supervisor to extend and deepen their reflections. One aspect of VEO use that showed difference was the use of tags: while the pre-service teachers and Kelly used specialized tag sets that helped guide them, the UK high school context teachers hardly made use of the specific tags, mostly using the quick tag. For this matter rather than drawing the difference in pre- and in-service use, it can be said that the more individualised the reflection post-VEO use is the more need there is to use the specific tags. The more collaborative and dialogic the reflection becomes the less important it is to use the specific tags, as the observer has the chance to explain why they marked that critical instant. Having said that it is seen that VEO acts as a catalyst for both types of dialogic reflection whether this is between the teacher and their own teaching video or between two colleagues discussing the lesson post-observation.

Chapter 6 Reflective Writing Using VEO

6.1 Case 1: Lale – reflective essays

This section will attempt to answer the question how Lale engaged in reflective practice through a thorough analysis of her reflective essays. The analysis was carried out with a dual focus, separately examining the quality and focus/content of the reflections. The quality of reflection was analysed employing qualitative content analysis with the Reflective Framework (see Table 3.5), while the focus of reflection was analysed through thematic analysis. The quality of reflection analysis will be presented first, followed by the analysis of focus of reflection.

6.1.1 Quality of reflection

Following the processes outlined in the methodology section, the analysis for quality of reflection was carried out by coding reflective segments against the Reflective Framework created within this study. The reflective chunks were determined by a shift in focus/topic which indicated the end of one chunk and the start of the next. In addition to this, different classroom instances were also coded as separated chunks unless explicit links were made by the trainee teachers. In Lale's case this proved slightly difficult to do as her writing included a lot of example instances that were only connected by an overarching heading. However, the decision was made to keep to the 'different classroom instances different chunk unless specifically linked' guideline. Two factors supporting this decision are given below:

- Although Lale used headings in her reflective writing, different aspects of the
 overarching heading were focused on in the writing. For instance, under the
 Feedback heading some instances looked at non-verbal feedback others were
 focused on positive feedback, which called for a separation of instances.
- Specific classroom instances can be reflected on in a more complex way than others, thus creating the need to segment every different time instance unless they were linked.

The presentation of analysis will start with an overview of the two reflective essays with data visuals. This will then be followed by a focus on each level of the reflective framework, and data extracts will be presented when relevant.

The segmenting process of Lale's reflective essays resulted in 47 chunks for her first essay and 45 chunks for her second. The high number of chunks is influenced both by Lale's writing and the segmenting decision outlined above. Table 6.1 below shows the number and distribution of the reflective levels in Lale's essays, a bar chart (Figure 6.1) is also provided for visualization:

Table 6.1 Lale Reflective Essays Coding						
	Reflection 1		Reflection 2			
Framework levels	#	%	#	%		
Descriptive	11	23%	19	42%		
Evaluative	1	2%	6	13%		
Explanatory	16	34%	12	27%		
Reasoning	8	17%	0	0%		
Dialogic	10	21%	5	11%		
Transformative	1	2%	3	7%		
Total	47	100%	45	100%		

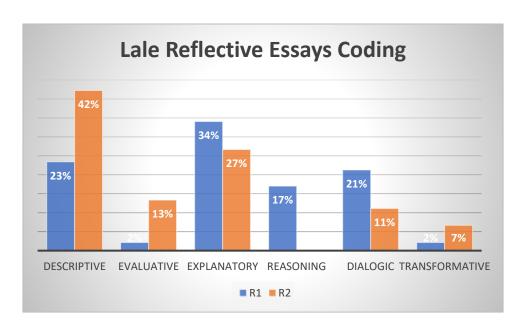


Figure 6.1 Lale Reflective Essays Coding Bar Chart

The coding of Lale's reflective essays does not follow an apparent pattern. While in her first essay the highest number of segments were coded as Explanatory, this changes to

Descriptive in the second essay. Although the first three levels form the majority of Lale's reflective chunks (59% for Essay 1 and 82% for Essay 2), she displays ability of reaching the Dialogic and Transformative levels of reflection. An interesting observation is the low number of Evaluative coded segments, with only one in her first essay; and the absence of segments coded for Reasoning in her second essay.

Following this brief overview, the next section will look at each level of the framework in detail by providing extracts to further support the points made.

Descriptive

The Descriptive level of the framework covers sections where the classroom instances are only reported in a matter-of-fact way with no evaluation or explanation added to the descriptions. Lale's descriptive segments included a lot of instances that were provided as examples of a certain teaching act, these examples were not evaluated or linked together in any way which resulted in them being coded as descriptive. For instance, in her first essay under the title of feedback Lale wrote:

'When the silent cinema ended, I said "Clap your friends." because group B won (06:58). Also when we finished filling all the gaps, I said "You all did great. Clap yourself." (23: 54).' (LR1_23)

'While making posters, a group called me. They said they found a party that they can make poster for so I showed them thumps up to show them it is good (30:10).' (LR1_24)

In both of these extracts, Lale details her non-verbal feedback activity. While the first one gives examples of inviting the students to applaud their peers, the second one reports Lale doing a thumbs up as positive feedback. Coding these segments as descriptive does not intend to imply that they are not valuable for the reflective process. On the contrary there is value in the actions of noticing classroom instances, viewing them as significant enough to describe, bringing together different examples of a teaching act/strategy and organizing these under relevant headings. However, in a journey that is intended to lead to a learning or transformation of some kind, noticing and describing are the very first steps to take.

The pattern of descriptive examples continued in the second reflective essay as well. In the extract below Lale describes the different types of questions she asked and refers to an instance where she asked an open-ended question:

'I asked different types of questions during the lesson. I tried to ask open ended questions more. Even when I asked "yes/no" questions, I tried to make it open ended. At the beginning of the lesson, I asked "What do you see in this picture? What this picture is about?" (00:47). When they did not answer, I gave an example "There are trees and other things." (LR2 14)

In addition to the descriptive segments above, sections where Lale described lesson activities were also coded as descriptive if there was no evaluation of the activity included, the extract below is an example of this:

'The video was about the things that we should do to protect the environment. I asked my students to watch the video carefully and catch the solutions we did not write. My students said most of the solutions before so there was little that was not said. Then I asked them what they do in real life to protect the world.' (LR2 3)

Here, Lale describes a video viewing activity she did in class by referring to the content and steps of the activity. Any evaluation of how the activity went would have moved this segment to the next level on the framework.

To conclude, the descriptive segments in Lale's were in two forms: describing an activity in the lesson or describing a specific classroom instance as an example of one of the focused topics. While the first form can serve as background information, the frequency of the second form indicates a high level noticing thus can provide a strong base for further reflection.

Evaluative

The Evaluative level of the framework is one step beyond descriptive and is characterised by the addition of an evaluation, value judgement, realization and/or observation to the descriptive sequence. There were not many segments coded as evaluative in Lale's essays, with only one in her first essay and six in the second. This shows that Lale's segments tended to either remain descriptive or move further than evaluative to the other levels of

the framework. The sections that were coded evaluative tended to include observations and realizations, the extract below is an example from her first essay:

'One of the points that I realize is that these students are used to translations. When I said something, they understand it but they translated it immediately. For example, when we looked at the bold chunk on the worksheet. "Parties for no reason" was written bold. When I said it out loud, some students immediately tried to translate it to Turkish (24:55). Another time, I said "Loudly" to a student to read it loudly and they immediately said "Daha yüksek sesle." (louder) (21:00). When I said "Six minutes.", some students said "Altı dakika." (six minutes) (27:20).' (LR1_11)

In this extract Lale shares a realization regarding students' use of L1 and remarks that they are used to translation. This realization is followed by several examples from the lesson that serve as evidence to her point.

In the second essay evaluative segments were mostly related to the activities in the lesson. For instance, in the extract below Lale reflects on a phase of the lesson that she found successful – which is the evaluation. Starting off by remarking on the high engagement levels of the students she continues to describe how the brainstorming activity went.

'The successful part of the lesson was the beginning. Students were more alert and they were willing to share their ideas. I brought a video thinking that they could not remember all solutions but they remembered a great deal. All students offered at least one solution so our brainstorming map was huge. The pictures I showed at the beginning of the lesson activated their previous knowledge. They shared their ideas about the different world situations and chose one of them. When I wrote "What should we do?", they immediately began to answer (04:20).' (LR2 5)

Explanatory

The third level of the framework Explanatory mainly focuses on sections that provide a brief answer to the question why. This includes surface explanations that refer to personal preferences, opinions, and beliefs. Another form of writing included in the Explanatory level is providing alternative course of action without evaluating action taken or detailing the

reasoning for alternative. This was included as it is seen as at the same surface level as explanations referring to personal principles.

Lale's essays featured a high number of Explanatory segments with this level occupying the highest percentage in her first essay (34%) and the second highest in her second essay (27%). Some of these were in the form of surface level explanations, for instance in the extract below Lale is reflecting on what she identified as the problematic stage of her lesson:

The most problematic stage of the lesson was listening activity. I planned for students to do it with their pairs but some students did not want to be pairs. For example, Student H did not want to be partners with Student M and said "Hocam ben tek olmak istiyorum." (*Teacher I want to do it alone*) (07:56). Student M started to talk during the listening so I called his name (10:06). The instructions were clear. I told them in simple sentences like "We are going to listen a recording."(07:06). I tried to explain the pairs by pointing two students (07:26). Again, I showed two fingers and pointed at two students to be clear about pairs (07:46). But they started to talking when I tried to pair them and this led some confusion (08:06)' (LR1 6)

She evaluates the instance as problematic and identifies the reason as the students not wanting to be in pairs. Providing student quotes as evidence for the unwillingness, Lale remarks that her instructions were clear by also describing her instructions to make the point. The extract concludes with Lale stating that student talk during pairing caused confusion. Thus overall, the points made in this extract are the students did not want to be paired, which led to student talk, and this resulted in the evaluation of the instance as problematic. Beyond this surface explanation of 'student unwillingness' there is a lot of scope for further exploration. Some that come to mind are evaluating the activity structure and thinking about why it was designed as a pair activity in the first place or further questioning why the students did not want to be in pairs possibly linking this to student relationships or context.

In addition to these surface level explanations, a lot of the segments coded as Explanatory in Lale's essays had reference to alternative courses of action without any reasoning. A common language pattern was also noticeable in these extracts with a lot of them formed

with the use of structures such as 'could have' and 'should have'. In the extract below Lale details a corrective feedback instance where she corrected a student's pronunciation, she then concludes this instance by mentioning peer feedback as an alternative strategy.

'In silent cinema activity, a student tried to say "engagement" (06:18). I waited for her to try again. She tried three times but could not pronounce it so I said it. I could have asked another student to say it.' (LR1_27)

While this displays her knowledge of alternative strategies, there is no reasoning provided for the mentioning of it, which led to its coding as surface and reactionary thus in the Explanatory level.

Extracts from Lale's second essay are provided to further illustrate this point:

'When a student did not get how we save energy, she asked "Öğretmenim save energy nasıl oluyor?" (*Teacher how do we save energy?*) (16:43). I explained it in English "We didn't use so much energy.". I could have asked another student that if they know.' (LR2_8)

'After we watched the video, I asked "What was there in the video that we did not write?" (15:10). I firstly could have asked "What was there that we wrote?" to make them talk more.' (LR2_15)

The alternative choices of action mentioned here focus on including the students more, checking information and increasing L2 production. While these can be considered as goals to strive for in language teaching, Lale's writing does not make clear her reasoning in suggesting them or even how the alternative action would have been better.

Overall, it can be said that in the Explanatory level the trainee starts to move beyond describing and provides explanations or alternative actions for classroom instances. The room for development here would be further questioning the reasoning for alternative actions. However, this point also reveals one of the issues with analysing written reflection: as the writing is the sole source of analysis anything not present in the writing is not taken into account. The reality might be that Lale has very good reasoning for suggesting the mentioned alternatives, possibly one that is based on the evaluation of her practice and that is linked to teaching pedagogy, however as those links are not clear in the written reflection

the analysis cannot take these hypotheticals into account. This does not change the course of analysis; however, it should still be kept in mind as a caveat. One way to overcome this caveat as a teacher educator would be to engage in further dialogue and ask Lale why these alternative actions are mentioned. This could either lead to the discovery that the written reflection does not fully represent Lale's thinking, or it could encourage the trainee to engage in analytical thought.

Reasoning

In the fourth level of the framework the expectation is to find writing where reasoning moves beyond surface explanation to either include the impact of actions or to link with pedagogy or context. Another form of writing included in this level is where the reasoning behind evaluations is made clear. An interesting observation relating to the Reasoning level is that while there are several segments coded in this level in Lale's first essay, there are none in her second essay.

The extract below shows a sample reasoning segment from Lale's first essay:

'Poster making activity was fun in my head but it did not really go as I planned. This was mostly because we lost our precious classroom time with listening for the third time. We had to hurry up to finish it and this caused some problems. Students did not really understand the instructions and they started to talk with each other.' (LR1_4)

Here, Lale evaluates one of her planned activities stating that it did not go according to plan. She then lists a chain of events that caused this activity to go in a different direction. These start off with a time management issue due to the previous activity running over, which leads to a rush of the next activity, that influences instruction giving which finally leads to confusion amongst the students – resulting in a reality far from the fun activity she had initially planned.

In another segment of reasoning, Lale reflects on the outcome of an activity and provides reasoning as to why she was not pleased with it:

'One thing that I did not liked was outcome of the voting for the poster. Girls made a deal and two groups won. Actually, the fourth groups was more creative and more

like as I asked. But this was democracy and you could not always get what you want.' (LR1_47)

In this extract Lale reflects on how a voting exercise did not play out the way she expected it to due to the students making deals to vote a certain way. Lale underlines that group four's poster was closer to what was expected from the task but concludes her reflection with a surrender to the democratic voting process. Although she appears to accept the outcome and not further question the process, if there were a need for change this could be easily built upon her apparent reasoning of not liking the outcome because it was not fully representational of the task requirements.

The idea behind the Reasoning level is that once the trainees have a clear idea of why something happened the way it did, the next step can be to take on a questioning stance and enquire what can be done about it, which will hopefully lead to a learning instance or change in practice.

Dialogic

The Dialogic level of the framework is the level that incorporates more of a questioning stance. In this level the trainees are expected to step back from their practice and analyse it by including multiple perspectives, focusing on what worked and what did not, identifying areas for improvement or considering alternative actions grounded in evaluations or reasoning. Any one of these actions was seen as enough to place a segment in the Dialogic level.

Lale displays Dialogic reflection in both of her essays, more so in the first one than the second. The extract below is a good example of this type of reflection:

'The listening that I chose for the lesson was a little fast for their level so we had some problems at this stage. When I planned the lesson, the listening did not sound so fast to me but I should have been more careful about their level. As it was fast, I had to open the video with subtitles but they were still missing some parts. At that moment, I decided to read it out loud for them to catch that parts. This led the

challenge to be low because I read it out loud. If it went as I planned, we would just listen twice and then try to answer.' (LR1_3)

Here Lale reflects on how a listening activity went during her lesson. The listening track turned out to be too difficult for the students' level, faced with this unexpected obstacle Lale details her managing strategies which included providing subtitles and then her reading the text out loud herself. She then evaluates these steps stating that reading it out loud made the task too easy. This perspective of looking at what worked and what did not, provides a great opportunity for learning.

In another representative segment of Dialogic reflection Lale links two contrastive instances from her teaching:

'At the beginning of the class, I asked "What is our topic today?" (00:28). I answered immediately "Parties, right?". I could have waited for students to try answering. I said this and just move to the activity. I should have connected the question with the lesson. When we finished filling the blanks, I asked "Do you see the black sentence?" and when I got the answer "Yes.", I continued "What does it say?" (24:32).' (LR1 15)

This section is from the questions heading of Lale's first reflective essay. In the first instance she reflects on not providing enough wait time for students to answer, stating that getting a response would have been a better way to link the question to the lesson. After this she jumps forward to another classroom instance where she did wait for a response. Lale focusing on wait time and bringing together these contrastive instances were seen as evidence of stepping back thus considered sufficient to code as Dialogic. However, it should be noted that within each level there are weaker and stronger forms of the level's reflection. For example, in this case Lale taking this one step forward to evaluating the impact of the contrastive instances would have further deepened the reflection.

Transformative

The final level of the framework is focused on change or improvement. This can be in the form of expressing an intention of change for future lessons or a display of learning from experiences.

Lale included a section focused on future teachings in both of her reflective essays, however the existence of the heading did not automatically translate to the sections being coded as Transformative. In her first essay most of the reflection under the Next Class heading was coded as Reasoning as there was a lack of focus on change or improvement. The only segment that was coded in this level is the short extract below:

'I liked the activities that I prepared for the class but if I did that lesson all over again, I would be more careful about listening. The third listening was unnecessary and it lowered the challenge. The first two listening was enough.' (LR1_45)

Here, Lale revisits the issue she had with the listening activity and states that if she had to do it again, she would pay more attention to it. Despite this section not including any concrete future plans for improvement, this hypothetical mention of being more careful was seen sufficient to identify the section as Transformative.

The other segments coded as Transformative in Lale's second essay also remained vague in the plan for improvement department. For instance, in the extract below Lale reflects on her activity choices and states that one plan for her future lessons will be to design activities that increase student engagement and participation:

'I liked my activities. The first two activities had students engaged and they were willing to speak. In the future, I will try to design my lesson for students to talk more.' (LR2_44)

While there is a display of intention for improvement, there is also room for this to be elaborated leading to possibly a higher quality of reflection with a more concrete plan of improvement. Nevertheless, the intention to develop practice is valuable as it is the first step in real change taking place.

To summarize, while the majority of Lale's reflective segments were coded in the first three levels of the framework (Descriptive, Evaluative and Explanatory), she displayed ability of reaching the higher levels of Dialogic and Transformative. Despite including a lot of descriptive writing, her essays had a high level of detail which can serve as fertile ground for further reflection as the very first step of noticing various classroom instances has been taken successfully.

This section examined the quality of Lale's reflections by looking at relevant extracts for each of the framework levels. The next section of the analysis will examine Lale's focus of reflection via thematic analysis.

6.1.2 Focus of reflection

Following the analysis of quality of reflection in Lale's essays, this section will present the analysis of the focus of reflection. The thematic analysis resulted in four overarching themes: focus on lesson planning and management, focus on teaching practices, focus on students, and focus on self as a teacher. Each theme will be presented in detail with relevant extracts included to illustrate the point. Table 6.2 below provides an overview of the main and sub themes. Some of the sub themes have been divided further, a chart displaying the full extent of the sub themes will be presented with each relevant main theme.

Table 6.2 Lale's focus of reflection themes				
Main themes	Sub themes			
Focus on lesson planning and management	Classroom management			
	Lesson planning			
Focus on teaching practices	Feedback			
	Instruction giving			
	Teacher initiation			
	Missed learning opportunities			
Focus on students	Student motivation and engagement			
	Unwillingness to participate			
	Use of L1			
Focus on self as a teacher	Professional development			
	Teaching style			

Focus on lesson planning and management

The overarching theme of focus on lesson planning and management will be presented around the two sub-themes classroom management and lesson planning. Figure 6.2 below provides a detailed summary of all the sub themes.

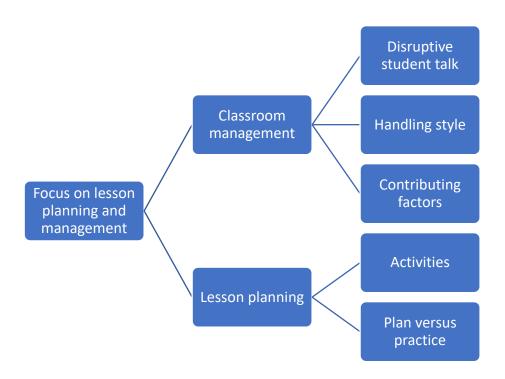


Figure 6.2 Lale's focus on lesson planning and management

Classroom management

Classroom management was a huge focus in Lale's first reflective essay. While there was some focus on it in her second essay, this was minimal compared to the extent it was featured in the first reflection. This is not unexpected as in the VEO use for lesson observations section (see 5.1.2) it was established that the Discipline tag was used the most for Lale's first lesson and it was also the main focus of the supervisor feedback meeting. One observation to note here is that the reflection guidance provided to the trainee teachers did not include a focus on classroom management/discipline. Despite that, Lale included a classroom management heading in both of her essays, possibly displaying the impact of VEO tag use and post-observation feedback meetings. Lale's focus on classroom management

was divided further into three sub themes as disruptive student talk, handling style, and contributing factors. These will be presented in the order of mentioning.

Student talk and noise were mentioned frequently in Lale's reflections. The references to disruptive student talk mainly focused on how it impacted the lesson and led to communication break downs:

'Communication problems were mostly caused by noise. Students did not understand what I said and I could not understand them.' (LR1)

'Students started to talk with each other. When I watched the video, I realized that there were noises most of the time. This caused some problems. We could not understand each other. Because of this, they did not understood my instruction for the poster activity.' (LR1)

In addition to the general references, Lale also expressed having problems with a specific group of students relating to student talk:

'The male students who sat at the back was especially problematic for me. I wish I just made them sit somewhere else. They talked with each other when they had the chance. I had to warn them several times.' (LR1)

Although Lale defines the student talk as problematic, her reflections do not extend to thinking about the possible reasons for the high amount of student talk and mainly focus on the further issues it caused.

Another focus of reflection in relation to the disruptive student talk and classroom management in general was Lale's handling style. In both reflective essays she describes instances during which she tried to manage the classroom, resulting in a display of the different strategies she employed. For instance, in the extract below, she mainly focuses on how she used clapping her hands to manage student talk:

'I tried to get the attention by clapping my hands. I did this several times. For example, when the time was out for making the poster, I clapped my hands and said "Guys." (33:48). Again, when I was calling students to the stage and there was noise, I clapped my hands (34:58). One time, the class got noisy so I moved my hands toward down to show them that they need to be a little quiet (25:12). This did not

stopped them so I said "Guys." loudly. Student M was still talking so I called his name and said "Hush." (LR1)

Here, Lale mentions several tactics she used including clapping hands, gesturing for the student to quiet down, calling out the talking students all together and singling out a student to call out. Throughout her essays she provides a lot of examples of her handling style, many of which are accompanied by quotes of her in class talk such as 'Guys.' 'Listen, please.' or 'Okay, listen to me.'. Despite the high number of instances, Lale rarely evaluates the effect of her handling style resulting in her reflections remaining descriptive.

The final sub-theme under classroom management is titled contributing factors, this outlines Lale's thoughts on what caused the disruptive student noise. As there was not much focus on the reasoning behind the high levels of student talk, there are only two factors to mention within this sub theme. One of them, which Lale mentions several times, is lesson interruption. In the extract below Lale lists all the instances her first lesson was interrupted and in the reflective essay this is positioned as a highly contributing factor to the disruptive classroom talk:

'One of the reasons for students to lost their attention was because the lesson was interrupted three times. At the beginning of the lesson, one of the students got a little sick so she had to go to bathroom(02:42). This also caused some confusion when she came back because I told another student to sat at her place(09:40). Another interruption was that a sick student came from hospital(04:17). The last one was a student on duty(14:08).' (LR1)

Another contributing factor comes from Lale noticing her orientation patterns during the lesson. In the extract below she draws a link between her focusing on individual students and the rest of classroom talk increasing as a result:

'Also, I realized that at some points I just tend to be interested with one or two students. This led class to be ignored sometimes so students talked with each other.' (LR1)

Overall, classroom management was a big focus especially in Lale's first reflective essay, however a lot of this focus was placed on identifying noise as an issue and describing

problematic management instances. Despite the general surface level reflection on classroom management, Lale did reflect deeper in some instances which have been discussed in the Evidence of Development part of section 5.1.2.

Lesson planning

References to the lesson plan appeared in Lale's essays in the form of describing and evaluating planned activities. Reflections on time management were also placed under this sub-theme as it is a central part of lesson planning.

Lale referred to her planned activities in both of her reflective essays. This was most likely to be in line with the reflection guidance that asked the trainee teachers to summarize their lesson aim and classroom procedures. Consistent with the guidance, Lale included descriptions of the activities at the start of her essays. The extract below is an example of this, these sections provided the reader with context for lesson, however, did not appear to serve much function for reflection.

'The presentation was only consisted three pictures. I asked their opinions about them. I asked them which one they prefer. Then I asked them to give solutions. I wrote "What should we do?" in the middle. As students said their answers, I wrote them on the board. Students were willing to share their ideas so we had a huge map.' (LR2)

Some sections that referred to planned activities moved beyond description as Lale evaluated how they went. These were gathered under the sub-theme plan versus practice. Reflecting on an activity that went as planned Lale wrote:

'Silent cinema activity was a good way to start to lesson. As they knew the game from their lives, it was easy for them to grab the game. This part of the lesson went mostly as I planned. Students had fun and they got motivated to the lesson.' (LR1)

Here, she both evaluates the activity and provides reasoning for her positive evaluation referring to student engagement.

The reflections on planned activities were not limited to those that went to plan, Lale also reflected on sections of the lesson that did not go to plan. One such instance stemmed from students' unwillingness to work on the activity in pairs:

'The most problematic stage of the lesson was listening activity. I planned for students to do it with their pairs but some students did not want to be pairs.' (LR1)

Another one took place when there were issues with instructions:

'I prepared a worksheet that have Gargamel and Smurfs on the top. Students were supposed to write a sentence for each of them using the key pictures. The worksheet was not that hard to do but my students did not understand my instructions so they could not fill it at first. But then they understood and fill it. We lost some time while understanding what to do so we could not write our answers to the board as I planned before.' (LR2)

Here, Lale recounts how time was lost trying to clarify instructions and this led to the activity not being carried out as planned. Although she refers to several instances that did not go to plan, she rarely engages in further reflection to uncover how these deviations from the plan impacted the lesson overall.

Moving on with time management, Lale briefly refers to it in both of her reflective essays – evaluating it as 'not good'. Despite the evaluation remaining the same for both lessons, there is a shift in control and intentionality. In her first lesson one activity taking longer than expected leads to time issues with the following activities. Lale describes rushing the instructions which led to confusion for the students:

'Time did not go as I planned. That was probably because of the listening part that I did not expect to take so much time. This caused some problems for making activity because we did not had so much time. I had to give just six minutes for them to prepare and also I rushed the instructions to caught up with time. Because of this, students did not quite understand the point.' (LR1)

However, in her second lesson Lale reflects on making an intentional choice to extend some of the activities due to the level of engagement:

'My time management was not that good again. We could not complete the last activity. But this was because I realized the first two activities had potential for talking and at that moment I decided to extent it. I will try to be more careful in the future.' (LR2)

Most of Lale's reflections on planned activities were either descriptive to provide background information of the lesson or included some form of evaluation regarding how it went. Despite experiencing several problems with the planned activities Lale rarely made inferences for future planning, with one exception being the listening activity she had issues with, previously presented as an example of Transformative reflection.

Focus on teaching practices

The next main theme: focus on teaching practices will be presented by looking at the subthemes feedback, teacher initiation, instruction giving, and missed learning opportunities. Figure 6.3 Lale's focus on teaching practices below displays all of the sub themes gathered under the overarching theme of teaching practices.

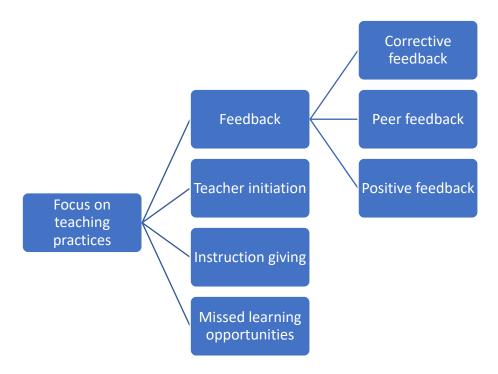


Figure 6.3 Lale's focus on teaching practices

Feedback

Lale reflected on her feedback practices in both of her essays. Under the heading of feedback there was focus on corrective feedback, peer feedback, and positive feedback. Lale

stated that for corrections she had planned to use implicit feedback, however this changed during the lesson, as she reflects:

'I corrected my students explicitly and give the right answer immediately. I should have tried to give implicit feedback as I planned. I think the reason for this could be that I tried to catch up the lesson plan.' (LR1)

In several instances Lale reflected on her feedback practices in a Dialogic manner. In the extract below she reflects on the impact of her explicit feedback and evaluates it as excessive upon realizing the student's behaviour through video:

'I corrected my students mistakes immediately. That was not a good strategy to use. I could have tried self-correction or peer correction. For example, Student O read his sentence, I corrected him all the time (19:06). When I watched it, I realized that he began to read it loudly but as I corrected his pronunciation, he started to read it more silently. I corrected him four times just for a sentence and this is too much.' (LR1)

While the above extract displays reflection on the impact of explicit feedback, in her second lesson Lale reflects on the impact of implicit feedback in a Dialogic manner:

'Sometimes, students used incomplete sentences. For example, they forgot the verb of the sentence. In this lesson, my students had some problems using the verb "use". at the beginning of the lesson, one of the students said "We should solar energy and wind energy." (04:45). I repeated her sentence using "use" but I could have asked her to correct herself or another student to help if there was a mistake. That could prevent the other students' usage too. When a student said "We should public transportation." (07:15). I did not correct him. The same sentence was made by another student(33:30) but this time I repeated the sentence using "use". At this point, I could have remind them the sentence structure.' (LR2)

Here she reflects on an instance where she used recast as a feedback strategy instead of a more explicit option such as self or peer correction. After mentioning two additional instances where the students made the same mistake and Lale either did not provide

feedback or provided implicit feedback, she remarks that providing explicit feedback might have been preferable and prevent further repetition of the same mistake.

Where her reflection on feedback was not fully Dialogic, Lale still approached the instances in more than a descriptive way and mentioned an alternative choice of action for most of them:

'When a student came to the board and write the word "Food" (23:24). I first said "Foods." but he did not understand. So I made the sign for an "-s" on air with my finger. I believe that this was a good strategy but I should have asked the student first and then maybe to his friends for peer correction.' (LR1)

This instance describes the use of nonverbal feedback to correct a student's spelling. Although Lale evaluates it as a good strategy, she still mentions other possible routes to take such as repetition and peer correction. Inviting peer correction appears as a common theme in Lale's reflections on corrective feedback, as she mentions it as an alternative after several feedback instances. Despite the frequent references Lale does not go further to question and compare the effectiveness of teacher feedback versus peer feedback. Neither does she provide reasoning for listing peer feedback as the preferred action, as a result these segments were generally coded in the Explanatory level.

Lale does include a minor focus on peer feedback instances that took place during her lessons. These instances are not examined further and seem to be included as examples:

'There were some peer correction during the lesson. A student did not know the meaning of "use" and before I tried to explain it, one of her friends said the Turkish translation. I pointed at her friend and said "Did you hear?" (25:53). She nodded but I could have asked for confirmation.' (LR2)

The final form of feedback Lale included in her essays was positive feedback. She referred to multiple instances and listed a range of different ways she gave positive feedback:

'I used verbal and non-verbal feedback for students. I clapped them and show thumbs up. I said "nice, good job, etc.". I even brought them chocolates. Sometimes they seemed to work but sometimes not.' (LR1)

The sections focusing on positive feedback were mostly descriptive and appeared to serve the purpose of displaying her range of employing this feedback method. There was only one instance where Lale questioned the appropriacy of using positive feedback:

'I mostly used "nice, good" as verbal feedback. When Student S gave answer to fill the blanks and I said "Nice." (17:26). Student H said "Bütün hepsini ben doldurdum." (I filled out all of them) and I answered "Nice job." (19:56). I do not know if this was the appropriate feedback because the activity was supposed to be done in pairs.' (LR1)

Here, Lale takes a step back and questions whether her saying 'nice job' to a student who remarked she completed all of the answers in an activity that was meant to be done in pairs was appropriate. Although this questioning stance does not extend further and she moves onto another instance after this section, the reflection still displays her moving away from a 'positive feedback = good' mentality and brings timing and contextual factors to mind.

To summarize, Lale reflected on a range of her feedback practices and in doing so displayed her knowledge of alternative choices of actions. While some of her reflections remained as examples of providing different forms of feedback, in some instances she did adopt a questioning stance and took into account the impact of her actions which is a form of reflective writing called Dialogic in the framework employed in this study.

Teacher initiation

The name of the teacher initiation sub theme was adopted from the Language Learning and Teaching VEO tag set (see Figure 3.3). Similar to the sub tags included there, this theme brings together Lale's focus on questioning, explaining and eliciting sequences in her teaching practices.

To start off with the focus on questioning; Lale had an explicit focus on questioning practices in both of her essays which is in line with the provided guidance for reflection. In both of her reflective essays she details the different types of questions she asked throughout her lessons:

'I asked different types of questions. Mainly, these are short answer questions and long answer questions. For short answer questions we can say "yes/no" questions,

one word answers and short sentence answers like "I will do". Long questions are mainly wh- questions. Some questions look as if they require short answers but turn to be long answers when student is enthusiastic to talk about that. At the same time, some questions look like they require long answers but students give short answer.' (LR1)

In this descriptive sequence, Lale describes the question types she employed. An interesting observation to make here is that she appears to link the response length to her questions to students' enthusiasm to talk rather than the questions posed. This form of thinking becomes more apparent as she reflects on a specific questioning instance:

'I asked some "yes/no" questions. For example, I asked Student O "Is there any food, drinks?" and he just said "Yes." (37:08). But before Student O, I asked the same question to Student E and she said "Yes and cookies." (36:24). The answer depends on students. If they want to say more, they always can.' (LR1)

In this instance, Lale does not appear to be content with Student O's response as she remarks 'he just said "Yes"'. Contrasting this with another student who slightly extended her response, Lale appears to place the responsibility of producing extended turns onto the student as she concludes 'if they want to say more, they always can.'.

Although there are not any explicit comparisons made, Lale's position on student response length appears to have shifted in her second reflective essay as she remarks: 'I asked different types of questions during the lesson. I tried to ask open ended questions more. Even when I asked "yes/no" questions, I tried to make it open ended.' (LR2)

She exemplifies this statement by reflecting on an instance where she displays her attempt at lengthening student production:

'Some questions, as I stated before, was "yes/no" questions but I tried to extent students' answer and asked "why". For example, at the beginning of the lesson, I showed them a picture and asked "Do you like this world?" and some answered as "Yes.". I asked them "Why?" to get longer answers (01:27). Then I showed another and asked them "Do you want to live in this world?". Their answer was "No." so I asked "Why?" (02:49). After we watched the video, I asked them "Do you like the

video?" and they said "Yes." (11:50). This time I did not asked "Why". I should have asked to get them talking.' (LR2)

Here Lale appears to have taken the responsibility of 'getting students talking' upon herself and there is no reference to student enthusiasm in relation to questioning practices in her second essay. Thus, despite the lack of explicit reflection, it can be said that a shift in mindset has occurred.

Lale also reflected on several explaining and eliciting sequences in her essays. These appeared either under the Questions or the Classroom Management heading. Generally written in a descriptive manner, Lale went into detail describing step by step her actions and the student response. The extract below displays her elicitation during a brainstorming task:

'3R are reduce, reuse, and recycle. This are the first things that come to mind when the environment is concerned. When we were brain-storming, my students did not say it. I wrote "3R" on the board. I drew arrows and wrote "R" to each one (18:08). I said "One is recycle.". My students did not answer so I wrote "e" next to "R". I waited for an answer but they did not so I said "One is reduce which means we don't use this much, but this much." and show it with my hands. I could have asked if anyone knows what reduce is before explaining myself. For the third one, I give a hint. I took a pen and said "I don't use this just once and throw it away. I use it again and again." One of them said "Reuse." and I repeated it louder.' (LR2)

Although Lale does not draw any inferences from the explaining and eliciting sequences she recounts in her essays, the level of detail in the writing would definitely allow for further self-analysis and reflection.

Instruction giving

Lale reflected on her instruction giving practices in relation to her planned classroom activities. These reflections were a mix of positive and negative. For instance, in her first lesson she attributed the success of her silent cinema activity to her clear instructions and took into consideration alternative strategies she could have employed:

'Most important reason for this activity to be successful was the clear instructions. I showed them the cards and told them they had party types on them (00:55). I

showed and said "this is group A and this is group B." (01:10). After giving instructions, I could have asked a student to explain what we were going to do. This way I could have understand if they got me or not. Maybe, I could act one as an example to make it more clear. But this was not necessary as they knew the game from their lives. Thankfully, I did not because it can be seen from the first and second person. Between 02:00 and 02:30, it can be seen that after the third person they almost got right at the first guess.' (LR1)

While Lale experienced no issues with the instructions of this activity, this was not the case for a worksheet she had prepared for her second lesson. Reflecting on it under the 'problematic part of the lesson' heading she stated: 'The worksheet was not that hard to do but my students did not understand my instructions so they could not fill it at first.' (LR2). Further in the essay she went into more detail by describing her instruction giving sequence:

'My instruction was "Thera are some pictures. Key pictures. You will write sentences according to pictures. One for Smurfs, one for Gargamel. Two sentences." (21:50). My students seemed that they did not understand these instructions. There were two examples on the worksheet for them but they could not figure out what to do. I read the examples and showed the key picture. When they did not seem to understand, I explained the second example. When I ask them "All of you understand, right?", they answered as "Yes." (26:42). I could have written some instructions on the worksheet. That may help them to understand it easily so there would not be much need of instruction. As the instruction part get long, we lost some time and could not complete the whole exercise.' (LR2)

In this segment, Lale recounts noticing that the two examples provided on the worksheet were not sufficient for student understanding. This led to her having explain the examples to the whole class. Emphasizing the time lost during the instruction giving phase, she proposes that written instructions on the worksheet might have worked better. Lale's issues with instruction giving were also the main comment made by her peer partner as she stated, 'I generally liked your lesson but the students did not understand your instructions in general' (LPF). This feedback combined with Lale's personal reflections created a learning point for her as she reflected:

'I designed the worksheet myself. After the lesson, I realized that a written instruction on the worksheet would make it easier for students to understand better. I will try to be more careful about this...' (LR2)

This intention of improvement -albeit vague- was coded as Transformative and is a display of the outcomes of the reflective process.

Missed learning opportunities

The last sub theme of teacher initiation is missed learning opportunities and it encapsulates classroom instances that could have been a learning moment for the students. The topic of creating learning opportunities is one that came up during Lale's first lesson feedback. Her supervisor brought up a classroom instance where Lale assisted a student asking how to spell the word 'reasons' by writing the word on the board herself. While Lale said she chose to write down the word herself as she felt like her time management was going poorly, her supervisor responded:

'You would have spent about ten five seconds there probably. Your writing down that word led to the student missing that learning opportunity (...) for example this student asked you and by writing it down yourself you did not actually do him a favour. At that point you could have gotten him to write it somehow, you could have said "try it" and corrected his version.' (LSF)

Lale did not include this specific instance in her reflections, but she did reflect on other instances that could have turned into a learning opportunity. She reflected on similar instances of responding to student questions as below:

'Another group asked "Babyshower nasıl yazılıyor?" (How do you spell baby shower?) (31:54). I just went and wrote it down for them. I wish I asked to her to try to say it in English.' (LR1)

'When a student did not get how we save energy, she asked "Öğretmenim save energy nasıl oluyor?" (*Teacher how do we save energy?*) (16:43). I explained it in English "We didn't use so much enery.". I could have asked another student that if they know.' (LR2)

In addition to instances related to classroom activities, she also reflected on how an off-task instance could have been turned into a learning opportunity and help build her student rapport:

'A student came to the class late because she was at the hospital. When she came, students said "Geçmiş olsun." (Get well soon) (04:19). I could have asked students why is she late or why they said "Geçmiş olsun." (Get well soon) I could have said "Get better soon.". Students could have learned this chunk at that point. I also could have asked what is her sickness. I did not use this opportunity to make students have some sort of a conversation. When we were filling the blanks, I asked her name (18:42).' (LR1)

Through these reflections it is clear that her supervisor's feedback had an impact on Lale, resulting her reviewing her teaching practice with a lens that focused on possible learning opportunities.

To summarize, Lale focused on various teaching practices in her reflective essays, including feedback, questioning, eliciting, instruction giving and missed learning opportunities. The quality of reflection varied and some of the instances appeared to be included purely as examples of practice. Despite this Lale displayed dialogic thinking and a shift in mindset in both questioning practices and instruction giving.

Focus on students

Focus on students was another major theme emerging from the reflective essay analysis. The theme will be explored in three sub-themes: student motivation and engagement, unwillingness to participate, and use of L1.

Student motivation and engagement

Lale refers to students' engagement levels in various sections in both of her reflective essays. Her overall perception of it is a positive one as she remarks in her first essay: 'Students were willing to be part of the lesson. There were no awkward silences between us. Students knew what they do so they were giving answers quickly and easily.' (LR1) References to student engagement were linked to lesson activities with Lale evaluating the

success of activities through participation. For instance, the extracts below are from the 'successful part of the lesson' section of her first reflection:

'The beginning part of the lesson was the most successful part of the lesson. This activity was perfect for to start the lesson with. All of the students were engaged with the lesson. There are several reasons for that. First of all, as I stated before, they knew the game from their lives.' (LR1)

'Another reason is that it was a game between two teams so they want to win the game. This led students to be more motivated and engaged with the lesson.

Students moved so they used their bodies and energies. This can help them to remember the parties from their friends' moves.' (LR1)

Reflecting on the success of her silent cinema activity, Lale refers to student motivation twice linking it to both the familiar nature of the game and the competitive element of it.

Similarly, in her second lesson she referred to instances of high student engagement during activities and concluded her essay by making an overall evaluation as well as plans for the future:

'I liked my activities. The first two activities had students engaged and they were willing to speak. In the future, I will try to design my lesson for students to talk more.' (LR2)

Unwillingness to participate

Contrasting with student motivation and engagement, Lale also reflected on students' unwillingness to participate during the lesson. Taking place only during her first lesson, Lale's students displayed unwillingness to work in pairs or groups:

'Some problems arose when I was trying to pair them. Some students wanted to do it alone and some just did not want to be pairs with some other. For example, Student H did not want to be pairs with Student S and said "Hocam ben tek olayım." (Teacher let me do it alone) (08:08). This was also the case when I tried to group them. I tried to group them regarding their closeness. Student S2 said "Herkes kendisi yapsa." (How about we do it individually) and I insisted "No, in groups." (25:40). Some students really did not want to be in groups and a student said "Ölüm

mü var ucunda." (it's not like it will kill you) (26:00) A student did not get in his group and he was making his own poster. When I realized this, I pulled his desk toward his group so he could be part of them (28:30).' (LR1)

In this extract, Lale details the unwillingness of the students to be in pairs or groups by providing multiple examples. An interesting observation is despite the apparent unwillingness, Lale does not appear to question the reasons behind this or the design of her activities. She recounts insisting on group work and even physically pulling a student's desk to make sure he is engaging in group work. The lack of reasoning is in contrast with her approach to student engagement.

Use of L1

The final sub-theme under focus on students is their use of L1. Noticing the amount of L1 use after watching the video, Lale remarks:

'When I watched the lesson, I realized students talked with each other in Turkish. Usage of native language in language classroom is inevitable but it was a little different in our case. I talked in English and my students tried to answer in English but they insisted on talking in Turkish with each other. This caused so much noise. It distract both me and other students. Even though I tried to stop them, unfortunately, it did not work.' (LR1)

In addition to noticing the extent of student L1 use, Lale also realized that the students were used to translating:

'When I said something, they understand it but they translated it immediately. For example, when we looked at the bold chunk on the worksheet. "Parties for no reason" was written bold. When I said it out loud, some students immediately tried to translate it to Turkish (24:55).' (LR1)

In her second lesson, Lale observed a decrease in these translations, and she no longer viewed it as a problem. Her overall impression of students' L1 use compared to her first lesson was that:

'They answered in their native language in the other lesson. But in this lesson, when they talk, they try to talk in English. There were a few exceptions.' (LR2)

Lale stated that students used L1 in her second lesson in two occasions: 'when they could not build their sentences' and 'when they could not find the right word'. She provided example instances of both occasions detailing the student talk and her response to it. To conclude Lale provides multiple examples of student L1 use and reflects on how it changed from the first lesson to the second. Although she provides her observations and realizations relating to the use of L1, she does not hypothesize as to why the L1 use patterns shifted.

Focus on self as a teacher

The last theme that was apparent in Lale's reflective essays was focus on self as a teacher. Under this theme Lale's focus on her professional development and teaching style will be displayed. In comparison to the previously examined themes, Lale's focus on herself was quite minimal. She reflected on how her lesson went in both of her reflective essays and emphasized her noticing through video. In the reflective essay of her first lesson Lale mentions how the video observation provided her with new perspective as she had evaluated her teaching positively, prior to receiving feedback and watching the lesson video. In her second reflective essay while the shift in perspective does not appear to be as significant as the first lesson, she mentions how reviewing the video helped her see the 'minor mistakes' that were overlooked.

As a result of these affordances, Lale notes that her second lesson 'was more successful than the previous one' (LR2) and attributes this success to writing the reflective essays and watching her lessons. Having witnessed her own professional development Lale remarked 'in the future, I will try to do this time to time to reflect upon my teaching.' (LR2)

Apart from her focus on her experience with VEO and her professional development journey, there was very little focus on Lale's self as a teacher. The one instance that can be mentioned was when Lale provided reasoning for her lack of interference towards the students that kept talking off task during the lesson:

'The ongoing noise was my fault. At the beginning; they did not talk that much but because I did not interfere with their talking, they started to talk more and more. That was because I do not like to be a despotic teacher and also because they were middle schoolers and I did not want to break their hearts or make them sad.' (LR1)

Although she does not elaborate further on this statement, her beliefs regarding discipline and teacher-student rapport have been unearthed. Despite having an issue with 'ongoing noise' Lale appears to have struggled with interfering with talking students. As she grounds her behavioural choice in not wanting to be 'a despotic teacher' it becomes clear that in her belief system she perceives the act of disciplining and managing student behaviour as quite harsh. Coupled with this her comment of not wanting to 'break their hearts or make them sad' further informs the reader of her guiding beliefs. The uncovering of driving teaching principles through reflection is of significance as it provides grounds for further reflection and possibly change, especially in situations like the above where the teacher's beliefs have possibly created a hindrance during the lesson.

6.1.3 Conclusion

To summarize, the analysis of Lale's VEO-based reflective essays first of all showed that Lale wrote long reflections, focusing on a range of aspects of her teaching experience and writing in a level of detail that would not have been possible without video data. The detail includes the frequent use of time stamps linked to classroom instances, direct quotes from her and her students' classroom talk and a step-by-step account of elicitation/communication trouble instances. Triangulation of the VEO tags, post-observation meeting data, and reflective essays showed that while Lale reflected on the tagged and discussed instances she also went beyond them engaging in reflection independently. Examination of Lale's essay structure showed the impact of VEO tags as she reflected on the same tags in consecutive order – indicating the use of VEO's tag viewing function.

Analysis of Lale's quality of reflection showed that she was able to reach the Dialogic and Transformative levels, however majority of her writing was coded in the first three levels of the framework – thus identified as mainly descriptive. A closer look at the descriptive segments showed that in these sections Lale provided numerous examples of teaching acts such as questioning and feedback techniques. Although the writing was descriptive it was not chronological and showed Lale bringing together different classroom instances under a specific topic, thus displaying her noticing skills. Analysis of Lale's focus of reflection showed her reflecting on a wide range of topics: classroom management, lesson plan and activities, feedback and instruction giving, questioning and elicitation sequences, student motivation, unwillingness to participate, use of L1 and her own development and teaching style. Lale

reflecting on various aspects of her teaching shows the complexity of reflection even when her primary focus was on classroom management for her first essay and her writing mostly descriptive. She engaged in dialogic reflection when reflecting on feedback practices through noticing the impact of explicit feedback on student behaviour via video and reflecting on the impact of implicit feedback on student uptake. The reflective essay analysis also showed shifts in Lale's thinking from her first lesson to her second in relation to time management and questioning strategies as she placed greater focus on students' language production and displayed intention of extending student turns.

Finally, bringing together reflective essay and classroom data, the evidence of development section showed Lale improving her classroom management skills after receiving VEO-based feedback from her supervisor, watching her lesson recordings, and engaging in reflective writing. This shows that video-based reflection can have an impact on teaching practices from its very first use, in the form of observable practice as well as mindset shifts. This finding is also significant in linking reflective practice with teacher development, displaying that reflection is impactful even if the majority of reflective writing is descriptive and the focus is on classroom management.

6.2 Case 2: Selim Reflective essays

To provide a detailed understanding of how teachers use VEO for their reflective practices, the analysis of reflective essays was approached from two angles: examining the quality of reflection and the focus of reflection. The quality of reflection was analysed employing qualitative content analysis with the Reflective Framework (see Table 3.5), while the focus of reflection was analysed through thematic analysis. While the quality of reflection analysis was guided by the Reflective Framework, for the focus of reflection the thematic analysis was not carried out in accordance with a pre-existing framework instead the focus themes that emerged from the data were brought together and grouped in a way that represented the data the most effectively.

In this section, first the analysis of quality of reflection will be presented and this will be followed by the analysis of focus of reflection.

6.2.1 Quality of reflection

This section will cover the qualitative analysis of Selim's reflective writing quality. The analysis was carried out using the Reflective Framework created within this study, details of the framework creation process have been reported in the methodology section (see 3.7.2). For the analysis, the reflective essays were divided into reflective chunks with a shift in focus/topic identifying the end of one chunk and the start of the next one. Every teaching act/classroom instance was categorized as a separate chunk unless the author made explicit connections between instances. Following this the reflective chunks were coded according to the framework, assigning one level to each chunk. This meant that a single segment could include multiple levels, however the highest level became the assigned code.

The presentation of analysis will start with an overview of the two reflective essays with data visuals. This will then be followed by a focus on each level of the reflective framework and data extracts will be presented where relevant.

The segmenting process of Selim's reflective essays resulted in 27 chunks for reflective essay 1, and 15 chunks for essay 2. This difference in segment number is expected when the differing length of the essays and the varying tag focus is taken into account. Table 6.3 below shows the number and distribution of the reflective levels in Selim's essays, a bar chart (Figure 6.4) is also provided for visualization:

Table 6.3 Selim Reflective Essays Coding					
	Reflection 1		Reflection 2		
Framework levels	#	%	#	%	
Descriptive	2	7%	1	7%	
Evaluative	4	15%	4	27%	
Explanatory	4	15%	2	13%	
Reasoning	5	19%	5	33%	
Dialogic	9	33%	2	13%	
Transformative	3	11%	1	7%	
Total	27	100%	15	100%	

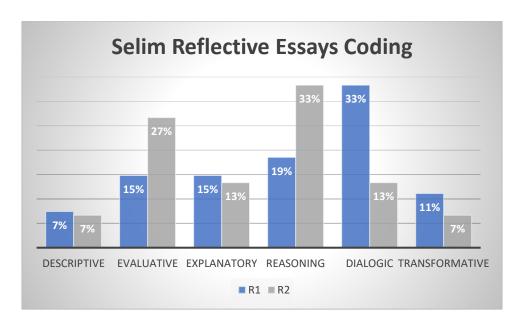


Figure 6.4 Selim Reflective Essays Coding Bar Chart

In both of his essays the number of purely descriptive segments are quite low meaning that Selim at least added some form of evaluation or value judgement to most of his writings. In reflective essay 1 the most frequently coded level is Dialogic while this changes to Reasoning, closely followed by Evaluative in the second reflection. This shift in reflection complexity aligns with the previous observations made comparing the content overview of the reflective essays. The lack of focus on problematic segments and areas of improvement in the second essay can be a possible explanation. Following this general overview of reflection quality, the next section will examine the framework levels in more detail.

Descriptive

The segments where Selim's writing was purely descriptive were quite few in both reflective essays. This finding is possibly a result of separating what is generally viewed as 'descriptive reflection' into different levels in the new framework. This was done in order to see exactly how often the trainee teachers were solely describing their experience which in Selim's case turned out to be rarely. These segments were also relatively short, two extracts are provided below to demonstrate this:

'Generally I tried to correct my students' mistakes by implicit ways. We can see an example of it at 01:50 when Student D mispronounced the word "chemist" I repeated it in the correct way.' (SR1 20)

'I planned to start the lesson by drawing students' attention to the topic environment. I tried to do that by starting the lesson in a spontaneous, converse aura.' (SR2_3)

Evaluative

The Evaluative level of the framework incorporates segments where any form of evaluation of the practice is provided in addition to describing. This can be through the use of qualifier adjectives such as 'successful' or 'problematic'; or it can be through evaluating classroom instances according to the lesson plan. Almost all of the segments coded as Evaluative in Selim's first reflection were in the latter category. He referred to the lesson plan multiple times throughout the essay, however these sections did not take on an analytical stance to further question or evaluate the effectiveness of the lesson plan.

'After the introduction part I continued with grammar part. This part also went as planned. I gave the rules first explicitly then I took feedback by asking students to write examples on board.' (SR1 3)

'Lastly, I forgot to give students homework even though I planned to give them one. That did not go as planned.' (SR1_5)

In the second essay, the evaluations were mostly judgements of how good/bad the chosen teaching method or instance was:

'Moving on at 04:45, I asked one of the students –Student C- to tell us the meaning of deforestation in English. As I faced with a long silence, I showed the action with body language. I think that was also a good teaching method.' (SR2_7)

When thinking about reflection as a whole, providing evaluations might not be seen as a huge step forward from simply describing an instance. However, the trainee making clear how they view a specific instance puts them one step closer to deeper reflection by allowing the next question to be a 'why?' question. Taking the extract above (SR2_7) for example, Selim can be asked why he thinks it was a good teaching method, leading him to identify his reasoning for the evaluation.

Explanatory

The reflective level following Evaluative encapsulates segments that briefly answer the question why in a relatively shallow manner. The surface level explanations are done through providing personal preference, opinions or beliefs as reasoning and not linking this to anything else including pedagogy or context. In the segment below Selim describes a classroom management issue he experienced during his first lesson. He reports having a 'technological complication' and explains the reason for it as not being able to foresee how the touchscreen board and sticky notes would interact.

'Carrying on with exercise part, things got complicated a bit. My first exercise was about finding the correct public buildings according to sentences given. I divided class into 3 groups and had students get close to each other. Managing the class at that moment was a bit troublesome for me but still I could stick to the lesson plan. The main thing that demoralized me in that activity was the technological complication. I did not take account of the touchscreen board. My activity needed students to stick post-it papers on my slide on correct answers. Whenever they tried to do that my slides kept changing and that caused inconvenience.' (SR1_4)

This segment includes elements of describing, evaluating, and explaining. A way of furthering the reflection could have been either expanding on the extent of the 'inconvenience' taking into account the impact or discussing any learnings form this technological mishap.

As each level of the reflective framework provides a further understanding of the trainee teacher's thought processes, an affordance of the Explanatory level in Selim's case was the revealing of his teaching principles. For instance, in the segment below Selim evaluates a feedback instance as successful and provides an explanation stating that implicit feedback is his preferred method.

'Another part I find it successful was at 25:06 when one of my students answered and mispronounced the word "flower". In my teaching way, I try to give my corrections and feedbacks as implicit as possible. I believe that implicit learning in foreign language education —especially if the case is vocabulary- is far better that

explicit learning. I handled that one moment and more others in a good way with a few flaws.' (SR1_10)

While the segment does not include further reference as to why implicit feedback is preferred by linking it to pedagogy or examining the impact of this feedback choice on the student; this information of Selim's teaching principles regarding feedback is valuable for further professional development. This aspect is discussed further under the Principles subtheme of the thematic analysis of focus of reflection.

Reasoning

The Reasoning level of the framework required the reflections to move beyond surface explanation. This can be done in several ways including providing a reasoning for an evaluation, linking personal reasoning to pedagogy or context, or focusing on the impact of actions while providing reasoning.

The extract below shows a reasoning segment from Selim's first reflection. He evaluates a questioning technique he calls the 'Ping-Pong effect' as efficient. He then continues to support this evaluation by explaining the way it works, referring to the teacher-student relationship and how it contributes to the student's motivation towards the lesson.

'Also at 01:27 when my Student E gave an answer as "sports center" I replied with another question which we may call a Ping-Pong effect. I find follow-up question technique a very efficient way of creating a communicative aura of teaching. In this way we can actually create a communication bond between students and teachers. When students realize that their answers are important to you they tend to be more talkative and willing to pay attention to lesson. To achieve this I had to listen to students' answers not ignoring them by continuing the lesson just after receiving the answer desired. This also helps teacher to establish an ongoing authority in the class.' (SR1 7)

In the same vein as the Explanatory level, the Reasoning level segments can uncover the trainee teacher's guiding principles, preferred pedagogy as well as beliefs and attitudes regarding a range of teaching matters.

Dialogic

The Dialogic level of the framework is the level that leads to change and development. The key characteristic is the reflections taking an analytical and/or questioning stance. This stance can be identified through the inclusion of multiple perspectives, a focus on what worked and what did not, recognition of possible areas for improvement and considering alternative actions.

In the extract below, Selim is reflecting on a feedback instance, he starts by describing the situation and his choice of action which was to implicitly correct the spelling mistake the student made on the board and to show her the corrected version. He carries on by stating that the instance 'may seem as a non-problematic situation', but reflects on possible 'better' alternatives regardless, mentioning encouraging self or peer correction.

'At around 06:20 Student A wrote an example on the board but she made a mistake while writing the word "theatre". At that point I waited for her to finish her sentence and be seated. Afterwards I corrected wrong form of the word with correct one and showed it to Student A. In this case it may seem as a non-problematic situation and I agree but I could have tried better methods such as giving a chance to my student to write that word again, or let one of her classmates correct the word.' (SR1_12)

What makes this segment Dialogic is the display of a questioning stance through reflecting on an instance that did not actually create any issues during the class and still considering alternative ways for improvement.

The Dialogic segments also included sections of reflective writing where Selim provided detailed accounts of his in-class decision making process:

'In my teaching practices there were also examples of communication troubles. There is one example at 19:35. I asked Student D a question about flower shop to get feedback if she learned to create sentence with conjunction "to". She remained silent for a while, after that I repeated my question again I faced with a long silence. Then I asked the question another student but still I faced a lack of knowledge. Then I change my sentence find a new word and actually asked same thing which is the usage of conjunction. Then I got an answer from my students.' (SR1_21)

In this extract Selim reflects on a problem-solving sequence he experienced when faced with silence from the student. He walks through the interaction and details the different strategies he employed to deal with the communication trouble. These include repeating the question, posing the question to a different student, and asking the question with new wording which resulted in the desired outcome of an answer. Although Selim does not make any general inferences from this sequence, the focus on what worked and what did not provides him with a strong evidential base to create further learning. It should also be noted that this level of detail in recounting classroom instances is unlikely to be possible without a video recording.

One last form of Dialogic reflection in Selim's writing was segments where he brought together, linked, and compared different classroom instances with the same focus. In the segment below he reflects on student use of L1 and identifies this as an issue he struggled to deal with:

'To continue with the student usage of L1 we can look at 03:00. At that moment my student gave an answer to my question with "and" but he suspected if it was a conjunction or not and he uttered this suspicion aloud. I want to state that our classroom was educated by a teaching method mostly composed of code-switching. So students actually had a habit to talk in L1 during lesson most of the time. Therefore handling the students' L1 usage was quite hard. I tried to compete with this occurrence by sustaining my usage of L2 and awaiting answers from students in L2. We can see another example of this issue at 05:25 when one of the students was trying to choose the correct "to" as the conjunction. At that point another student tried to help her friend by giving the L1 meaning of the task. All I could do at that time was to use the exact equivalent of the L1 word in L2. However if we look at 26:46 we can see that I tried a different way. In that phase, I seek answers for words related to meal times. When I ask about dinner they answer in L1 as usual and say "akşam yemeği" (dinner). Realizing that my questions would always receive an L1 answer at that point I turned to L1 and replaced roles with students and asked what about "öğle yemeği? kahvaltı?" (lunch? breakfast?). In this way students were forced to use L2 to answer my questions.' (SR1 16)

After outlining the issue of the students' frequent use of L1, Selim focuses on an instance that took place 05:25 where a student assisted a peer by providing them with a translation. Responding to this use of L1 Selim states he was only able to give the students the L2 equivalent of the used word, a strategy that does not exactly discourage the further use of L1. He then moves forward to a different instance that took place twenty minutes later and outlines a realization he had. He noticed that if he gave the students an English word and asked for its meaning, the students tended to show their knowledge by telling him the Turkish equivalent. Keeping in mind his goal of increasing student L2 production as well as checking knowledge, he decided to flip the roles and give them the Turkish word asking for its English equivalent. This segment shows Selim outlining an issue and walking through the solution by drawing from three separate instances of L1 use in the classroom. Thus, connecting this with how Selim used the tags to write his reflection, it can be concluded that the VEO tag system facilitates Dialogic reflection by allowing the trainee teachers to review the tags with the same focus consecutively, enabling connections and comparisons to be made.

Transformative

The final level of the reflective framework is concerned with some form of change, improvement, or learning. This can be displayed in the form of plans for future improvement or learnings as an outcome of previous reflective activity.

Reinforcing Selim's cyclical view of the practicum reflection experience; his first reflective essay concludes with a list of three points of development for his next lesson, while in his second essay the only segment coded as Transformative is where he reflects back on his first lesson and displays learning from that experience. The extract below from reflective essay one is provided as an example of Transformative coding, further extracts have been covered in the evidence of development section.

'Second thing that I would change in my next lesson is that I tend to be more problem solving in communication trouble issues with students. As I watched myself again and again, I realized that my qualifications in this segment are problematic because I really had trouble communicating with students whose L2 is not good as others.' (SR1 25)

To summarize, overall Selim's reflections rarely remained purely descriptive with most of the segments coded as Dialogic in his first essay and Reasoning in his second essay. He showed ability of reaching the Transformative level by identifying areas of improvement for his second class and displaying learning from reflections in his second essay. While concluding the analysis of the quality of Selim's reflections, it should be noted that greater importance is given to the trainee teachers' ability to reach a higher level of reflection over the number of segments coded in each level. The segment numbers are provided solely to give an idea of at which level the reflections tend to cumulate, rather than imply that the ideal would be for each and every segment to be at the Dialogic or Transformative level.

As this section covered the quality of reflection, the next section of the analysis will examine the focus of reflection in Selim's essays.

6.2.2 Focus of reflection

In this section, the thematic analysis of Selim's reflective essays will be reported. This aims to provide a detailed examination of the content of the reflective essays. The thematic analysis was carried out for both reflective essays and overarching themes have been drawn out. Some sub themes appear only in one of the reflective essays and this will be made clear in the relevant sections. The analysis will start with presenting an overview of the themes, followed by a more detailed look into each theme and sub themes while providing representative data extracts to illustrate the point.

Table 6.4 Selim's focus of reflection themes		
Main themes	Sub themes	
Focus on lesson planning and	Classroom management	
management	Plan versus practice	
Focus on teaching strategies	Effective strategies	
	Language skills and systems	
	Questioning strategies	
	Feedback strategies	
Focus on students	Student affect	
	Communication trouble	
	Use of L1	

Focus on self as a teacher	Principles	
	Performance and professional	
	development	

Focus on lesson planning and management

The first major theme in Selim's reflective essays was a focus on lesson planning and management, this was divided into two sub-themes as classroom management and plan versus practice. This focus content is similar to what is referred to as 'technical reflection' in the literature (Valli, 1997), incorporating reflection on behavioural and time management as well as lesson planning. Selim's focus on classroom management will be examined first, followed by a look at how references to lesson planning appeared in the reflective essays.

Classroom management

Classroom management is briefly focused on in both reflective essays. Despite the brief focus in the essays, an instance with classroom management trouble is the first thing Selim mentions in the feedback meeting with his practicum supervisor after his first teaching:

Supervisor: err yes first of all how did you find your own lesson Selim?

Selim: I mean it went well, I lost the classroom management a bit at some

point but apart from that... I think it was good (SSF)

Classroom management as a focus of reflection is not surprising as literature shows it can be challenging for novice teachers (see Evertson and Weinstein, 2011; Jones, 2011) as Lale's case study has shown.

The instance Selim referred to in the post-observation meeting is a classroom game activity that required students to be in groups. Selim reports having trouble managing the unexpectedly increased student talk during the group activity and defines it as 'troublesome':

'I wanted class to be divided into 3 separate groups to play this game. I did not foresee such a ruckus would arise in such a practice. During this period students from same group were supposed to get closer and everything went wild at that

point. Students were happy about working together with their friends and this made them more talkative and hard to manage during the lesson. But I believe that somehow I managed to keep things under control. I did not shout or got mad at any students once.' (SR1)

Although he details the instance when student talk became 'hard to manage', Selim's reflection on said instance does not extend to detailing the management strategies used or evaluating their effectiveness. Instead, it is left rather vague, stating that control was 'somehow' gained. Although relevant classroom management strategies are not discussed, the reflection still provides some understanding of Selim's stance on classroom management. From his statement that he 'did not shout or got mad at any students once' it can be inferred that resorting to raising his voice at the students or a display of anger are not acceptable management strategies for him.

Aside from this instance, Selim's overall evaluation of his classroom management during his practicum teachings is a positive one:

'I believe that throughout whole lesson my classroom management was quite good. Students listened to me as I listened to them. As I enhanced the interactive communication phases during lesson, their attention to the course also got developed.' (SR1)

'Throughout the entire lesson I did not lose my classroom management. Thanks to class being cooperative I did not struggle in that issue.' (SR2)

Looking at these evaluations, it can be said that Selim views classroom management as a joint endeavour between the teacher and the students, rather than a one-way act of disciplining. He touches upon mutual listening as a contributing factor to managing the classroom and attributes his success in this area in his second lesson to the cooperativeness of the students.

Plan versus practice

Throughout the reflective essays, there are several references to the lesson plan. This in itself is not surprising as the guidelines for self-reflection asked the students to reflect on

whether or not the lesson went as planned and discuss the difference between the plan and practice. In line with the guidance Selim starts off the reflections with an overview of planned procedures and activities and continues to refer to the plan throughout the essays. These references treat the lesson plan as the goal to reach and the classroom instances mentioned are only evaluated in terms of whether they match the plan or not:

- A descriptive account of the lesson steps is concluded with the remark "This part also went as planned." (SR1)
- An instance during which classroom management was "troublesome" is evaluated
 as: "Managing the class at that moment was a bit troublesome for me but still I could
 stick to the lesson plan." (SR1)
- A section of the lesson that did not go according to the plan is mentioned as such:
 "Lastly, I forgot to give students homework even though I planned to give them one.
 That did not go as planned." (SR1)
- Overall evaluations of the lesson are also made in reference to the lesson plan, and it
 appears that "sticking to the lesson plan" is viewed as a measurement of success:
 "Nothing unusual happened in my lesson. In that way I find myself successful." (SR2)

It appears that the lesson plan was perceived as a rigid structure that needed to be followed, and adherence to it as a determinator of success. Thus, reflections on the lesson plan were used as a check or display of adherence. There was no further discussion questioning the effectiveness of planned activities, thinking of alternatives, or detailing the possible impact of things not going to plan.

Focus on teaching strategies

The next major theme is the focus on teaching strategies. This looks at the sections where the trainee's focus is on the various strategies and methods implemented throughout the lesson. It is divided into four sub themes as effective strategies, language skills and systems, questioning strategies and feedback strategies.

Effective strategies

The sub-theme effective strategies displays the classroom instances that Selim reflects on as 'successful'. These instances do not appear to be linked to an overarching teaching strategy

focus, such as questioning or feedback strategies. Instead, they appear as individual and independent examples of moments of perceived success, thus effectiveness was chosen as the theme to bring them all under. The focus on successful segments of the lesson is also prompted by the reflection guidance as the trainees were asked to briefly describe a short segment that they found successful. However, Selim does not limit his focus on one single instance, instead provides multiple examples from different sections of the lesson.

One such instance is from the start of his first lesson, Selim starts the lesson by activating the students' schemata and checking background knowledge related to the lesson topic of public buildings. He evaluates this instance as a success referring to student participation, activity flow and absence of communication troubles as determiners:

'Starting the lesson with such a practice was a good idea and this phase went smoothly as we can see in the video. Students answered my questions, showing their knowledge about the topic. I did not have any communication troubles here.' (SR1)

Similarly, another instance where a follow-up questioning technique was used is reflected on as a good strategy as it leads to further student engagement and better communication:

'I find follow-up question technique a very efficient way of creating a communicative aura of teaching.' (SR1)

Another teaching act that Selim classifies as successful is the use of body language. This appears in both reflective essays:

'Apart from these, again at the same moment at 01:29 we can see that I used body language by showing the action done in a sports center by lifting my arms ups and down. In my opinion for young learners' classes, body language is a vital aspect of teaching.' (SR1)

'Again at 02:40 I explained the term "conjunction" by showing the convergence of my hands to each other. I find these body language phases successful.' (SR1)

'Moving on at 04:45, I asked one of the students ... to tell us the meaning of deforestation in English. As I faced with a long silence, I showed the action with body language. I think that was also a good teaching method.' (SR2)

It is clear that Selim views the use of body language as a good skill to incorporate into teaching. This stance is supported by reference to students' age stating it is 'vital' for young learners' classes as well as the affordances it provides in facilitating student understanding.

Overall, it can be observed that in determining the success of a segment, Selim's focus is on communication and student understanding.

Language skills and systems

Within teaching strategies, Selim also focused on strategies relevant to teaching language skills and systems. In his case these were grammar, the objective of his first lesson, and vocabulary, the objective of his second lesson. This type of focus shares similarities with the Theory level of Farrell's (2015, p. 27) framework as it 'explores and examines the different choices a teacher makes about particular skills that are taught'.

The section concerned with language skills in the first lesson's reflective essay is on the use of explicit grammar and metalanguage. This is a matter that comes up during the supervisor feedback meeting with the supervisor pointing out Selim's use of metalinguistic terms and questioning its clarity for the students. The supervisor examines the choice of strategy by referring to the style of grammar instruction the learners are used to, whether the grammar topic is presented for the first time, and the supporting strategies Selim used in conjunction with the explicit grammar such as body language. Emphasizing that using metalanguage is a matter of choice, the supervisor offers starting with an example as an alternative choice of action.

The extract below, coded as Dialogic, shows Selim reflecting on this matter:

'Moving on with the problematic segments in my teaching practice, I can start with the moment at 02:36 which I give explicit information on grammar topic conjunctions. In practice, it did not cause any problematic issues but my method could've been enhanced by initiating the lesson with an example instead of explicitly giving the grammatical structure. Actually I wanted to exposure the conjunction just before giving it explicitly by asking students about public buildings and actions that we can do there. But still this may not be effective every time so to be sure starting with a sample sentence could be helpful.' (SR1)

He starts off by labelling the segment as 'problematic', however further in the extract his evaluation of the strategy choice takes a different tone as he remarks 'in practice, it did not cause any problematic issues'. This is followed by Selim considering alternative strategies that could 'enhance' his teaching in line with his supervisor's suggestion. Despite the initial labelling as problematic, Selim appears to view his choice of strategy (using metalanguage) as an effective one as he remarks 'but still this may not be effective every time', implying that it was effective in this specific instance. This is followed by him taking on board his supervisor's suggestion acknowledging that it 'could be helpful'. To summarize, in this segment Selim can be seen questioning the effectiveness and appropriacy of a teaching strategy that did not cause him any issues in practice, leading to the assumption that this focus was prompted by the post observation feedback Selim received from his practicum supervisor. Thus, this extract does not only demonstrate Selim reflecting on strategies to present grammar, but it also illustrates the influence of reflective dialogue on individual reflection.

With the lesson focus changing to vocabulary in his second lesson, Selim reflects on the differences between teaching grammar and vocabulary. He draws contrasts between the two regarding the level of complication. He states that 'grammar teaching could be very complicated' (SR2) and expresses the difficulty he experienced in lesson one trying to 'choose the best option' amongst different grammar teaching strategies. Contrary to this, he views teaching vocabulary as 'quite basic and simple' (SR2) as 'there are not many variations as much as in grammar part' (SR2).

Regarding vocabulary teaching strategies, he reflects on two instances displaying his stance on providing additional vocabulary in the form of synonyms while presenting target vocabulary and the teaching of words that are commonly confused due to similar spelling.

The extract below shows Selim's reflection on the presenting vocabulary phase that took place at the start of the lesson. Selim uses images as the mode of presentation by first showing an image of the relevant/target vocabulary item and then providing the word.

'At that particular moment, I utter the word "earth". Students give a feedback referring they know that word. Afterwards I give the synonyms of the word "earth"

which are "planet, world". I think that in means of teaching vocabulary, such additional vocabulary teachings are really essential.' (SR2)

Through detailing a relevant classroom instance Selim displays his view on providing additional vocabulary to the students, deeming it 'essential'.

In the second instance Selim reflects on his vocabulary selections in a multiple-choice exercise:

'I used multiple choice exercises and when I did that it used words resembling each other. It caused a bit complexity in minds of my students but that was what I intended to do. If we look at 27:24 we may see that there is an exercise which has 2 imitative answer options. They were "conserve-converse". Some students fell for this exercise claiming they are both same options. I did so with the aim of teaching students these confusing words at a young age so that it would not be so hard for them to remember these words in future. I think that teaching such imitative words at young age is an advantage.' (SR2)

In the above extract, Selim argues that the presentation of commonly confused vocabulary items at a young age is an advantage. In doing so he does not appear to further reflect on the confusion this question design caused for the students or make clear whether it led to the students learning the two vocabulary items. Despite the room for further reflection in both extracts, the display of Selim's stance and reasoning on certain aspects of vocabulary teaching can serve as a basis for further discussion and reflection through prompts.

Questioning strategies

The questioning strategies sub-theme outlines how Selim focuses on his questioning techniques in his teaching practices. The specific focus on questions was prompted by the reflection guidelines, with the instruction 'reflect on the questions you asked to the students' given to the trainees.

Most of the references under this theme are displays and examples of the different types of questions Selim asked throughout his two lessons. These include referential questions that focus on content, display questions to elicit prior knowledge, questions to check

understanding, knowledge or to elicit answers and questions to increase and encourage L2 production.

'My questions to students were generally relative to my topic. My initiation questions were to check students' background knowledge and I found these questions with the aim of receiving feedbacks.' (SR1)

'When we look at 17:10 during the game phase, I ask a question just to receive feedback from students and awaiting a completion of sentence.' (SR1)

'Apart from that, I tried to ask questions to students as much as possible to encourage them to talk more during lesson. Generally I asked questions relative to topic of the lesson. However, I also asked questions with the aim of checking irrelative knowledge as we may see at 22:51 when I was answering exercises.' (SR2)

Selim makes a point to note the relevance between his questions and the lesson content, however he also mentions asking questions irrelevant to the lesson topic presumably to increase students' L2 production. Despite the display of questioning range Selim presents, the reflections do not go any further to examine the impact or effectiveness of selected questions. However, in one segment Selim does display a preference for question type, stating that his questions were mostly open ended:

'My questions were generally open question typed questions. I directly required information from students. The reason behind this was that I think that instructions and questions in a young learner classroom should be as explicit as possible. Because their comprehensive skills are not really developed for L2 learning processes and implicit instructions or questions would just make our job harder.' (SR1)

He outlines his reasoning for open ended questions by referring to the young age of the students and the level of their comprehension skills.

Feedback strategies

Feedback strategies is the most heavily focused on sub theme under the main theme of teaching strategies. Despite this significance, this focus only appears in the first reflective essay and there are no references to specific feedback instances in Selim's second reflective essay. Similar to questioning strategies, a focus on feedback was also prompted in the

reflective writing guidance. Additionally, feedback was one of the main topics discussed in the post-observation meeting, and when providing a road map for further reflection Selim's supervisor advises him to focus on feedback practices.

Differing from his focus on questioning strategies, Selim appears to reflect on feedback strategies in a much more well-rounded manner. Moving beyond providing examples of the different feedback giving strategies employed, Selim reflects on both successful and problematic instances and provides more detailed descriptions.

Focusing on his successful feedback practices Selim emphasizes his preference for implicit feedback:

'Another part I find it successful was at 25:06 when one of my students answered and mispronounced the word "flower". In my teaching way, I try to give my corrections and feedbacks as implicit as possible. (...) I handled that one moment and more others in a good way with a few flaws.' (SR1)

'Generally I tried to correct my students' mistakes by implicit ways. We can see an example of it at 01:50 when Student D mispronounced the word "chemist" I repeated it in the correct way.' (SR1)

However, his evaluation of feedback practices does not remain single faceted as in one instance where he provided feedback correcting a student's spelling error on the board and showing her the correct version, he questions whether alternative feedback practices would have been preferable:

'In this case it may seem as a non-problematic situation and I agree but I could have tried better methods such as giving a chance to my student to write that word again, or let one of her classmates correct the word.' (SR1)

Furthering his critical stance on his feedback practices, Selim also reflects on the impact implicit correction and positive feedback might have on students stating that this might lead to the student not noticing their error:

'What is wrong here is that I perpetually gave positive feedback to Student D. I said "good job, well done, very good etc." too much and this actually could cause student to think that what she is saying is completely right.' (SR1)

In addition to the above, another feedback instance came up repeatedly in Selim's first reflective essay and the post-observation meeting with his supervisor. This instance has been examined in detail in the evidence of development part of section 5.1.3, thus is not included here to prevent overlap.

In summary, Selim reflected on the numerous teaching strategies he employed during his practicum teachings. The degree of detail and criticality varied amongst the different strategies focused on, with feedback strategies given the most significance. Even when the reflected upon instance lacked detail and was approached from a single point of view for instance simply remarking it as 'successful', the reflections still provide a window into the trainee's thinking which can be used as a base for further discussion.

Focus on students

Another major theme emerging from the reflective essays was a focus on students. This encapsulates sections of the reflections that either solely focus on the students or the teacher-student interaction. The theme will be explored in three sub-themes: student affect, communication trouble and use of L1.

Student affect

Starting with examining the sub-theme of student affect, it should be noted that this was not a subject matter Selim explicitly focused on, rather the importance placed on the students' emotional state became apparent in reflections where the primary focus was on teaching strategies. There are two extracts that illustrate this theme and in both, Selim mentions a 'communication bond' between the teacher and students. In this first extract Selim is reflecting on the effectiveness of follow-up questioning in creating a communicative classroom environment:

'In this way we can actually create a communication bond between students and teachers. When students realize that their answers are important to you they tend to be more talkative and willing to pay attention to lesson. To achieve this I had to listen to students' answers not ignoring them by continuing the lesson just after receiving the answer desired.' (SR1)

Here, it can be seen that Selim places emphasis on listening to students as a way to increase communication in the classroom. He also draws links between a teacher showing genuine interest while listening and the students' motivation to engage with the lesson.

The second instance Selim reflected on student affect took place when he tried to handle classmates mocking their friend's mispronunciation by ignoring them and giving positive feedback to the student who had made the error. This extract is discussed in further detail in the evidence of development section (see 5.1.3). In both instances Selim outlines how he took his student's feelings into account and by mentions the 'the communication bond' between him and the students. This makes the importance he places on the teacher-student relationship and rapport clear.

Communication trouble

The next sub-theme to be explored is communication trouble, this focus was both a prompt in the reflective writing guide and a VEO tag. Within this sub-theme Selim focuses on the instances during which he was not able to get answers from the students and the communication was interrupted in some shape or form. Below is an example of such an instance coded at the Dialogic level of reflective framework:

'In my teaching practices there were also examples of communication troubles. There is one example at 19:35. I asked Student D a question about flower shop to get feedback if she learned to create sentence with conjunction "to". She remained silent for a while, after that I repeated my question again I faced with a long silence. Then I asked the question another student but still I faced a lack of knowledge. Then I change my sentence find a new word and actually asked same thing which is the usage of conjunction. Then I got an answer from my students.' (SR1)

Here, it can be seen that Selim walks through the steps he takes to try and solve the communication issue and get an answer from the students. In this specific instance he tries waiting/giving time, repetition, asking a different student and paraphrasing the question which is the strategy that works. Although this example is one where the trouble is eventually solved, dealing with communication breakdowns appears to be an issue for Selim. Putting down communication troubles as an area of improvement, he links his issues in this area to his sustained use of L2:

'I think I do not really know how to act in such communication trouble cases. I tried to use L2 as much as possible but since students are not used to this much exposure communication problems was derived inevitably. I think that using code-switching would be quite helpful in these situations.' (SR1)

'As I watched myself again and again, I realized that my qualifications in this segment are problematic because I really had trouble communicating with students whose L2 is not good as others.' (SR1)

Use of L1

Linked with communication troubles, the final sub-theme under focus on students is the students' use of L1. As it was clear from the extracts provided for communication trouble, Selim's approach to language use in the classroom was to sustain his use of the target language as much as possible. While focusing on students' use of L1, Selim provides contextual information stating that the students were used to their teachers employing code-switching and had a habit of speaking in L1 for most of the lesson. Remarking that these contextual factors made 'handling the students' L1 usage (...) quite hard' (SR1), Selim's focus on students' use of L1 mostly consists of him tackling the question how can students' use of the target language be encouraged?

As mentioned above, Selim's initial choice is to sustain his L2 use to 'compete with' the students' L1 use. This is also an aspect of his teaching that was complimented by his supervisor as he remarked 'you constantly maintained English, that's important' (SSF). However, in his first lesson Selim attempts a different strategy:

'However if we look at 26:46 we can see that I tried a different way. In that phase, I seek answers for words related to meal times. When I ask about dinner they answer in L1 as usual and say "akṣam yemeği" (dinner). Realizing that my questions would always receive an L1 answer at that point I turned to L1 and replaced roles with students and asked what about "öğle yemeği? kahvaltı?" (lunch? breakfast?). In this way students were forced to use L2 to answer my questions.' (SR1)

In the above extract, Selim notices that his vocabulary related questions generally lead to students answering with the vocabulary item's L1 translation, this is possibly due to the

students' language level as it is not advanced enough to describe 'dinner' using English. This realization leads to Selim letting go of his firm stance on maintaining L2 and finding a solution that encouraged students' L2 production.

This discovery does not solve all of Selim's issues related to students' use of L1. In his second lesson, he realizes that his knowledge checking questions are generally answered in Turkish and marks this issue as one that needs to be solved.

Another strategy of encouraging student L2 production that Selim finds is not accepting student responses in L1 and increasing wait time until L2 production occurs:

'In general I can say that my teaching practice this week was quite triumphant. At 12:58 one of my students use L1 on task to answer my question which is "why do we turn off lights?" After not being able to get a response in L2 I wait for more answers even though the answer in L1 was correct. Then I saw that students responded my question in English. I think giving students time in such occurrences is a better tactic rather than just accepting the L1 answer and moving on with the subject.' (SR2)

In summary, it can be seen that while Selim notes students' use of L1 as an issue to be solved, he also reflects on several strategies he has employed that lead to students' use of the target language.

Focus on self as a teacher

The final major theme titled 'focus on self as a teacher' incorporates the trainee's references to his teaching principles that become apparent through reflective writing and a focus on his performance and professional development.

Principles

Starting off with the principles sub-theme; this encapsulates Selim's beliefs, opinions, and assumptions regarding various aspects of language teaching. The name of this sub-theme is from Farrell's (2015) Framework for Reflecting on Practice (see Table 2.3), as the second level of the framework, Principles, is where teachers reflect on their assumptions, beliefs and conceptions of teaching and learning. This sub-theme is particularly interesting as reflection in this study solely focused on practice and there was no guidance given to focus on non-practical aspects such as principles and theory. Having said that, it should be noted

that Selim does not explicitly focus on his teaching principles, rather they generally become apparent in sections where he is providing reasoning for his choices of action throughout his lessons. Most of these references have been briefly covered in the relevant extracts above, thus the presentation here will attempt to offer a summary and bring them all together. The principles that became apparent in Selim's reflections are as below, some have been presented in his own words and some have been paraphrased to increase clarity:

- Genuinely listening to student talk helps create a communicative classroom.
- Paying attention to students helps build a teacher's authority.
- Body language is an efficient and important aspect of teaching young learners.
- 'I believe that implicit learning in foreign language education –especially if the case is vocabulary- is far better that explicit learning.' (SR1)
- 'Instructions and questions in a young learner classroom should be as explicit as
 possible. Because their comprehensive skills are not really developed for L2 learning
 processes and implicit instructions or questions would just make our job harder.'
 (SR1)
- 'Teaching vocabulary is slightly easier than teaching grammar. I think that grammar teaching could be very complicated rather than teaching vocabulary.' (SR2)

The principles above cover a range of different matters related to teaching and learning including communication, teaching young learners, method of instruction and questioning as well as language skills. While these served the purpose of providing reasoning within the reflective essays, the beliefs and conceptions being uncovered serves a greater purpose for reflection in general. Having knowledge of the principles of teaching and learning a trainee holds, provides a strong basis for further reflection. Putting teaching practices and behaviours in the context of principles can facilitate and increase understanding of practice. Also, in the case where these beliefs are hindering the teacher's practice they can be used as a point of questioning and examining for further reflection and development.

Differing from the extracts presented above, in his second reflective essay Selim explicitly reflects on the role of a teacher, specifically mentioning a teacher's social role and possible influences on the students:

'I want to state that what I try to do in my lessons is not just teaching vocabulary, grammar or other English related subjects. I think that a teacher's job is more than teaching the subject of his/her lesson. As teachers, we are very important models of individuals in our students' minds. We are not ordinary employees that are supposed to do what they are only told to do. We have greater responsibilities in creating the concept of ideal individuals. We should also undertake teaching ethics, values, and awareness as a duty as well as teaching our branch. In this teaching practice I tried to draw attention to environmental care as much as I could. I tried to show them what is good and what is bad for environment.' (SR2)

This particular reflection is most likely prompted by the lesson topic environment. Regardless of the prompting factor it is quite interesting as Selim touches upon a teacher's social, moral, and ethical duties towards both the students and the public in general stating that teachers 'have greater responsibilities in creating the concept of ideal individuals'. These are all topics that are linked to what many scholars call 'critical reflection', the highest level of reflection that transcends 'practical' and 'technical' worries which focus on classroom practice, management, and teaching strategies. Critical reflection instead focuses on the wider picture considering social, ethical, and moral concerns and is seen as most likely unattainable for pre-service teachers (Hatton and Smith, 1995; van Manen, 1995; Valli, 1997; Larrivee, 2008). While it can be argued for the above extract that Selim is not questioning, examining, or analysing an ethical or moral point rather he is simply stating what he considers to be the role of a teacher, the unprompted focus in itself is of significance.

Performance and professional development

The final theme to explore is Selim's focus on his own performance and professional development. This focus is prompted by both the overall nature of the reflective task and the guidance to answer the question 'what would you change in your next class?' within the reflective essays.

Selim's overall impression of his performance is a positive one, he describes several instances as 'successful segments' of the lessons, some of which have been previously discussed within the scope of the effective strategies sub-theme. At the end of his first

reflective essay, he lists three points of development as an action plan for his next lesson. These are changing feedback check methods, improving how he deals with communication troubles, and lastly increasing interactivity – an action point that he states he would 'not change but develop' (SR1). Selim concludes his first reflective essay by reiterating his overall evaluation of the lesson: 'I find rest of the teaching process quite sufficient and appropriate.' (SR1).

Moving onto the second lesson, Selim evaluates his performance as 'quite successful' (SR2). He attributes this success largely to the lesson focus being on vocabulary instead of grammar. Apart from the overall evaluation, the focus on professional development in the second reflection is done through drawing comparisons with the first lesson. For instance, Selim states:

'My first training experience was not really perfect and I had many errors. I tried to minimize these errors as much as possible in my second training. I believe I managed to do that because I realized that teaching vocabulary is slightly easier than teaching grammar.' (SR2)

Looking at this extract, it appears that Selim's view on his first teaching practice has shifted, possibly a result of the perspective gained from the distance to the experience, as he remarks it was 'not really perfect' and had 'many errors'. Although he points out his attempt at minimizing 'these errors' in his second teaching practice, he does not go into further detail regarding how this was accomplished.

In his second essay Selim focuses on a single instance that he presents as an improvement in his checking learning practices, which has been examined within the evidence of development section. Apart from that specific instance Selim's focus on his professional development remains quite general with statements such as: 'I reckon that I was far better compared to my first training lesson.' (SR2).

Selim's final remark on his professional development is 'I think my problem with feedback, and checking learning process is solved in this practice.' (SR2) This gives the impression that for Selim this reflective cycle was successfully completed. There is no further reflection on the other points of development mentioned in the first lesson. Selim also does not clearly

identify any areas of improvement from his second lesson, thus further corroborating this view of a reflective cycle coming to an end.

6.2.3 Conclusion

Analysis of Selim's quality of reflection showed that Selim rarely wrote in a purely descriptive manner, rather he at least added some form of evaluation to most of his writings. This level of detail was able to be observed due to the use of the Reflective Framework created in this study as it expands the descriptive levels of writing. Overall Selim's reflections were coded at the higher levels of the framework with the most frequent code being Dialogic (level 5) for his first essay and Reasoning (level 4) for his second. He also reaches the Transformative level in both essays showing that he either made plans for change or displayed learning through reflection. The Dialogic segments showed Selim providing detailed accounts of his in-class decision making process and linking/contrasting different instances from the lesson as mentioned above. This indicates that the VEO tag system facilitates Dialogic reflection by allowing teachers to review the tags with the same focus consecutively, enabling connections and comparisons to be made.

Selim's focus of reflection analysis showed that he reflected on a range of topics with varying degrees of detail and depth. These included management, questioning and feedback strategies, language skills as well as student related aspects such as their L1 use and communication troubles. Selim had minimal focus on classroom management, while the lesson plan was referred to extensively – albeit in a non-questioning manner. Contrasting with this, Selim's reflections on feedback strategies went beyond examples of different feedback techniques and included looking at both successful and problematic instances. The reflective essays revealed information regarding Selim's teaching principles which shows that even when the reflection is based on classroom experience it can go beyond observable actions to include principles, attitudes, and theory – in other words a more holistic form of reflection.

Finally, following the Dialogic stance Selim took when reflecting on several feedback instances, examination of classroom data displayed his improvement in checking student learning. As a result of VEO-integrated supervisor feedback and engaging in reflective writing, Selim gave increased attention to eliciting the correct forms from students when his recasts did not receive uptake. Although in his second lesson he clearly placed more

importance on noticing the lack of student uptake, Selim's second reflective essay did not include an apparent focus on feedback strategies. Rather, he only included one instance of vocabulary presentation and drilling to show his improvement in the area. This speaks to the need of incorporating classroom data to get a fuller picture of the impact of reflection processes.

Chapter 7 Discussion

This chapter aims to provide a synthesis of the research findings from the analysis chapters and locate them in the relevant literature. The chapter will be organized around the three sub research questions, making clear how the data analysis answers the guiding questions and supports the main argument. This study shows that VEO is able to promote Turkish preservice teachers' professional development and reflective practices when a) a subject specific tag set is used, b) VEO-based lesson observation and tagging is carried out by a supervisor/mentor, and c) the tags are used to structure reflective dialogue and guide individual reflection. Additionally, it shows VEO can act as a catalyst for dialogic reflection whether it is taking a step back to reflect or reflecting through dialogue with another party.

7.1 Sub RQ1: How do teachers use VEO for their reflective practices?

Drawing from the case study and thematic analysis, the findings and discussion relating to this question will be presented under six themes. The first three themes will be focused on how VEO was used in the pre-service Turkish context looking at VEO tags extending supervisor guidance, VEO tags scaffolding reflective writing, and differences between supervisor and peer observation. The fourth theme (VEO shaping feedback dialogue) draws data from both the pre-service and in-service context, while the fifth theme of active video recording to capture student voice is solely from the UK in-service context. The section will be concluded with a brief overview of unused features of VEO.

7.1.1 VEO tags extending supervisor guidance

In the pre-service Turkish context, the practicum supervisor observed and tagged the trainee teachers' first practicum lessons. This use in itself differs from other studies in the literature that implement video editing/annotation for the development of reflective practices, as the pre-service teachers have generally been asked to carry out the editing and annotating themselves (van Es and Sherin, 2002; Calandra *et al.*, 2009; McFadden *et al.*, 2014; Joksimović *et al.*, 2019). With the supervisor tagging the video, they are moving beyond the role of an observer simply providing post-lesson feedback and essentially carrying out a form of analysis through time stamping noteworthy classroom instances.

It has been well established that pre-service teachers need guidance for reflection (Bryan and Recesso, 2006; Lee, 2007; Lai and Calandra, 2010). Guidance for written reflection provides student teachers with direction and makes the reflection processes clearer (Lai and Calandra, 2010). The value and impact of supervisor feedback has been especially noted in several studies (Bain *et al.*, 1999; Kourieos, 2016; Körkkö, Morales Rios and Kyrö-Ämmälä, 2019). In fact, in the recent VEO studies while Körkkö et al. (2022) stated that their participants would not have reached deeper levels of reflection without supervisor guidance, Schwab and Oesterle (2022) remarked it could be beneficial in assisting student teacher noticing.

In this study, the supervisor guidance has been twofold: the lesson observations were followed by a short, approximately 15-minute, face-to-face VEO-based feedback session; and the trainee teachers had access to their supervisor tagged classroom recordings. Indeed, an examination of the post-observation feedback meetings showed that the supervisor used the tags to extend his guidance for the trainee teachers' individual reflection. The feedback meetings focused on the critical incidents in the lesson and at the end of these meetings the supervisor provided the trainee teacher with one or two specific tags to focus on. This way the short feedback meeting served as a springboard for further individual reflection, but the trainee teacher also got to take a road map with them in the form of tags. For instance, in Selim's case one third of the tags were reviewed during the feedback meeting and the rest was used as a roadmap for further reflection.

Using VEO tags to extend guidance this way has implications regarding pre-service teachers' noticing skills and time efficiency. van Es and Sherin (2002) state that being able to identify significant events in a lesson is one of the key characteristics of noticing and strongly argue that pre-service teachers should be taught noticing skills. Research has stated that preservice teachers watching recordings of their teaching tend to focus on superficial aspects, possibly due to the sheer volume of information provided by video format and student teachers as a result not quite knowing what is worth focusing on (Pailliotet, 1995; Akcan, 2010). Blomberg et al. (2013) also note that guidance and structure provided for the viewing process can help pre-service teachers with this information overwhelm. Thus, having access to supervisor/observer tags not only provides a window into the supervisor's thinking and noticing without their presence but might also serve as a space for pre-service teachers to

develop their noticing skills in a supported manner. Looking at the tagged instances, the preservice teacher has in front of them the classroom data and the relevant tag, however they still need to be able to identify what in that moment was worth tagging, which aspect of that incident warranted the tag, and why. Engaging in a form of guided self-analysis with the tags has the possibility of developing crucial noticing skills. Regarding time efficiency, engaging in reflective discussions with individual pre-service teachers requires a significant time commitment. Especially if this is done in a format where the supervisor tries to guide the student teacher towards deeper reflection through prompts. Previous studies have suggested that various reflective activities such as selecting clips for discussion (Calandra et al., 2006), prioritizing peer collaboration and discussion (Rhine and Bryant, 2007) can also provide a time saving affordance for the teacher educator. Lack of time in a busy schedule was also an issue for the Turkish pre-service cohort supervisor, in fact it became one of the reasons to have the second observation cycle done through peer collaboration. However, using VEO tags this way allowed the supervisor to provide the pre-service teachers with an overview of their lesson, focus on a couple of the key incidents through the tags, and conclude the short 15-minute meeting with a roadmap for further reflection in tag format. Thus, possibly revealing a time saving format without compromising necessary reflection guidance.

In their study set out to identify different forms of reflection support provided in technology enhanced learning, Kori et al. (2014) identify three support types as technical tools, technical tools with predefined guidance and technical tools with human interaction guidance. Predefined guidance is described as set writing or question prompts such as the writing guidance provided to the pre-service teachers in this study (see Appendix E). While such guidance can be beneficial it is not adaptive and can result in teachers providing generic responses (Hobbs, 2007; Kori *et al.*, 2014). Human interaction guidance was also used in the pre-service context in this study in the form of supervisor and peer feedback meetings. Thus, according to the categorization of Kori et al. (2014), the Turkish cohort used a combination of technical tool with predefined guidance and human interaction. However, using tags to extend supervisor guidance presents a new form of technology integrated guidance: a unique combination drawing elements from human interaction and merging this with context specific guidance. A classroom video tagged by a supervisor has traces of

human interaction as the viewer (the trainee teacher) gains access to the observer's thinking through the tags. The tag sets themselves are predefined in a sense as one has to choose or create a tag set prior to using VEO. However, when put into use the tags circumvent some of the issues surrounding predefined guidance as they are adaptive to the context in the sense that even if the tag set remains constant, the particular sub-tags used in any one lesson will create guidance specific to that lesson. Thus, the guidance moves from a predefined one of 'focus on questioning and feedback practices', to an individually specific one of 'this instance here is an example of implicit feedback, look into that'.

7.1.2 VEO tags scaffolding reflective writing

Highly linked to the use of VEO tags extending supervisor guidance, the tags were also found to scaffold reflective writing. Both case study participants produced detailed and lengthy reflective essays with Lale's essays averaging at approximately 3230 words and Selim's at 1800. This is relevant as previous studies have indicated a positive relationship between the length of journal entries and the level of reflection (Bain *et al.*, 1999; Lai and Calandra, 2010). Although it is worth noting that what is considered lengthy is not made explicit in these studies. The impact of video viewing was clear in the reflective writing as both participants used timestamps to signpost certain classroom instances. While Selim's use of timestamps was mostly in the form of signalling the beginning of a certain classroom instance, Lale took a much more detailed approach making extensive use of timestamps and incorporating direct quotes from the video. Indeed participants carrying out video-based reflections in Rosaen et al.'s (2008) study also went into great detail, with some even focusing on specific students – a level of detail also visible in the reflective writing in this study.

Tags were found to scaffold reflective writing in two ways: by providing a framework for reflection and through the tag reviewing functions of the VEO app. The tag sets used with the Turkish cohort were created specifically for language teacher education and incorporate various foci including classroom management, questioning practices, feedback practices and L1 & L2 use. The thematic analysis reported in Chapter 4, showed that the tag sets provided a framework for pre-service teachers by showing which aspects of teaching were relevant to focus on. This is crucial as discussed above, teacher candidates need guidance when engaging in video viewing or writing for reflection (Dyment and O'Connell, 2010; Kourieos,

2016). The second way tags scaffolded reflective writing was through the tag reviewing functions. Through the VEO app the user can view the tagged instances in chronological order or grouped by sub and main tags. Analysis of the reflective essays and tagged lesson videos showed that in some sections the pre-service teachers reflected on the same tagged classroom instances consecutively, thus engaging in analysis through tag viewing. For instance, clicking on the Explicit Feedback sub tag allows the trainee teacher to see all the instances this tag was used and provides the opportunity to compare, contrast, and synthesize the practices in these various instances. Analysis of the reflective essays showed that using tags this way promotes reflection at the dialogic level as the trainee teacher is automatically taking a step back from focusing on a single classroom instance and is viewing multiple instances through the theme/focus of the tag.

While guidance for reflection is viewed as crucial (Hobbs, 2007), Tripp and Rich (2012) found that teachers largely preferred to select what they focused on themselves. In this study the pre-service teachers were given the option to choose one out of three tag sets – thus provided with some level of freedom in focus selection. However, the timestamp analysis revealed even further autonomy. In the reflective essays the pre-service teachers did not reflect on all of the tagged instances, did not write about all of the discussed instances and in some cases, they went beyond the tagged and discussed instances for individual reflection. This shows a level of autonomy and that while the tags do scaffold reflective writing, they do not limit reflection as the trainee teachers still have access to the full lesson recording and can choose areas to focus on independently.

7.1.3 Differences between supervisor and peer observation

Peer video observation and discussion is one of the methods employed to foster reflection and studies implementing it found that pre-service teachers benefited from the process and learned from their peer partners (Rhine and Bryant, 2007; Harford and MacRuairc, 2008). Peer observation was also incorporated into the Turkish context practicum structure with the pre-service teachers carrying out their second lesson observations with their peers which was followed by a post-lesson feedback meeting. Although this research does not have a specific focus on peer supported reflection, some differences between supervisor and peer observation were noticed that are worth mentioning.

The VEO tag use of peer partners differed from that of the supervisor. For instance, Lale's peer partner did not make use of the VEO tags while providing feedback. Whereas Selim's peer partner incorporated the tags but used them in a chronologic manner and did not provide explanations for his quick tag use which made up 22% of the tags. Neither of the peer partners provided further guidance for reflection in the form of specific tags to focus on. The possible implications of this were visible in the reflective essays as Selim produced a shorter second essay and wrote in chronological order rather than making use of tag groupings. Thus, the affordances of tags in extending reflection guidance and scaffolding writing were less visible in the peer observation cycle. Possible explanations to these differences might be the peer partners not seeing themselves in a position to provide further guidance, the trainee teachers preferring supervisory guidance, and the peer partners needing more training and experience in both the use of VEO and in providing constructive feedback to foster reflection.

The importance and relevance of the person carrying out the VEO-based observation and doing the tagging was one of the issues Selim brought up during the interview. He emphasized the need for the observer to be knowledgeable in the field so that they could provide useful tagging. In their VEO study Körkkö et al. (2022) also reported some issues with peer tagging as one of their participants expected their peer to tag less self-evident classroom instances and as a result assist their exploration of teaching, but was disappointed with the process. Thus, although not a focus of this study, further research can be carried out to uncover how VEO is used when the observation and tagging is carried out by different parties (peer or supervisor) and whether or not the difference in VEO operator has an impact on reflective processes.

7.1.4 VEO tags shaping feedback dialogue

Moving onto the VEO use present in both the pre- and in-service contexts of this study; VEO tags were used to shape feedback dialogue. In the pre-service context the VEO tagged video was present in the post-lesson supervisor meetings and the supervisor frequently made use of the tags to show the pre-service teacher relevant classroom instances. The affordances of video drawn from the literature state that the presence of video relieves any pressures on memory (Kaneko-Marques, 2015), allows for detailed analysis (Sherin, 2004b), provides the observed teacher with the view of the observer (Akcan, 2010) and can be used as a prompt

for further discussion (Körkkö, Kyrö-Ämmälä and Turunen, 2022; Marsh and Mitchell, 2014). The incorporation of VEO into the pre-service feedback meetings offered all these affordances with the added time advantage provided by the use of tags. The tags allowed the supervisor to both focus the feedback, through viewing the specific tags related to the trainee teacher's area in need of improvement, and efficiently make the most of the short amount of time they had.

While the Turkish context supervisor could extend his guidance through tags, the in-service teachers in the UK high school context took a different approach. These teachers emphasized that their primary use of VEO was dialogue based. This is not surprising as Major and Watson's (2018) review of in-service video studies showed collaborative viewing to be the largely preferred method. As the focus was primarily on the reflective discussion after the lesson observation, the observer in the UK high school context did not place much importance on accurate tagging. Instead, he mostly made use of the quick tag feature in order to time stamp relevant instances. Despite the different implementations of tags, observers in both contexts underlined the dynamic shift that occurred in the feedback meetings due to the presence of the VEO recording. With this format, both parties could assume an active role as opposed to the traditional observer to observee conversation (Çelik, Baran and Sert, 2018). In other words, teachers could look at the video evidence 'on a more equal footing' (Crichton, Edmett and Mann, 2019, p. 35) which allowed for a more collaborative discussion (Batlle and Seedhouse, 2022).

7.1.5 Active video recording to capture student voice

This use of VEO was specific to the UK high school participants. Making use of the mobility of the tablet, the observer in this context walked around the classroom while recording, to capture different student groups. He sat with and focused on different pairs/groups of students throughout the lesson, sometimes even engaging with them to check their understanding of the task in hand or whether or not they were able to follow the lesson as the teacher had expected.

Video recordings of lessons provide the teacher with the chance to see their lesson from a different perspective, within this they also gain the opportunity to observe student-to-student interaction that could go unnoticed during the lesson (Richards and Farrell, 2005b). Despite this great access video provides, it does not come without drawbacks as positioned

recording devices have a certain amount of range (Hüttner, 2019). This means decisions need to be made regarding what is to be captured and where to point the camera (Marsh and Mitchell, 2014). Even with the camera focusing on the whole class, with the lively and loud nature of classrooms, especially during communicative activities, it can be difficult to hear or even see what individual students are doing (Sherin, 2004b). Options to overcome these drawbacks include placing audio recording devices around the classroom or positioning two cameras to capture both the teacher and the learners (Snoeyink, 2010). Based on similar concerns, Fadde et al. (2009) recommend implementing what they call active videotaping. This involves a supervisor recording the lesson and 'panning and zooming the video camera as needed to follow the action of the class' (Fadde, Aud and Gilbert, 2009, p. 78).

What the observer in the UK high school context did was a step beyond Fadde et al.'s (2009) active videotaping, as while the researchers underline the need to pan, zoom and follow the action, the camera is still in a fixed position. With the mobility of VEO on a tablet computer, the observer had the option to get close to different students, sit near them and even record what they were working on. This use of VEO worked on two planes for the two observed teachers: surprising for one and affirming for the other (see Focus on student learning in section 4.1.1). Upon watching the VEO recorded videos, one teacher noticed the mismatch between their assumption of student knowledge and the student's actual knowledge – thus the video recording became a real eye-opener. Whereas for the other teacher it was affirmatory, as through the observer's questioning, the teacher got to see that his students understood the goal of the lesson activities and had a positive view of it all. Thus, the process became a rewarding one as it served as evidence of a well thought out lesson. In either case, this form of active video recording and high focus on students provided the observed teachers with an otherwise impossible perspective.

However, like any implementation of technology this use of VEO also has possible drawbacks (Çelik, Baran and Sert, 2018). With researchers cautioning that the presence of an observer and/or a camera in the classroom can become intrusive and distracting for the students (Richards and Farrell, 2005a; Çelik, Baran and Sert, 2018), it is natural to suspect an observer walking around the classroom and actually engaging with students has the potential to become even more of a distraction. Although on this note, Calandra et al.

(2018) state that due to their familiar and commonplace nature, mobile devices are less obtrusive in the classroom compared to professional cameras. One could also argue that the perspective teachers gain from this video observation method is worth the possibility of some distraction. Overall, while this form of active video observation presents unique affordances to capture student voice, contextual factors and its possible drawbacks should be considered prior to implementation.

7.1.6 Unused features

The final theme to include in answering how teachers used VEO for their reflective practices is a brief focus on the unused features of VEO. In addition to its tablet-based interface that is used during live recordings, VEO also has an online portal where users can upload and share their videos. The VEO portal allows for further collaboration as tagging can be carried out retrospectively and teachers can comment on each other's videos. Walsh's (2022) recent study is a perfect example of how these online features of VEO can be used to form a community of practice, develop classroom interactional competence and reflection. The study was designed for the reflective tasks to be carried out online, starting with giving the participants training on how to use the tag set (SETTVEO) and the online portal. This was followed by each participant uploading a ten-minute snapshot video of their lesson which was then reviewed using the app. In their chapter providing a practical framework for integrating VEO into continuing professional development, Seedhouse, Miller and Haines (2022) outline the steps as Stage 1 planning, Stage 2 recording, Stage 3 reflecting, Stage 4 discussing and Stage 5 actions. While these stages are overarching and can be applied to all settings, depending on the context the medium can change. For instance the authors (Seedhouse, Miller and Haines, 2022) provide the Kazakhstan example in which the teachers carried out most of the process online. Meeting face to face once for the initial planning stage, the teachers then recorded and tagged a lesson which was uploaded to the VEO portal along with a brief annotation. The reflecting and discussing stages were also carried out online on the VEO portal. Of course, one thing to note is that in both of the mentioned studies the participants were physically distant which made online interaction their only feasible option. If the use of the portal is to be integrated into a setting where the participants can easily meet face to face, specific tasks need to be set such as writing the

reflections as notes on the tagged video or starting an online discussion based on a reflected moment.

In this study, in both the pre- and in-service contexts, the interactions were primarily carried out face to face. The VEO portal was mainly used for video sharing and reviewing the lesson videos for individual reflection. Although the Turkish context incorporated a peer collaboration element, this did not carry over to the online platform and was limited to the in-person meetings. Having said that, it is important to note that none of the contexts specifically integrated any reflection or collaboration tasks to take place on the portal. The fact that this aspect of VEO was not further explored by the participants confirms the need for reflective activities to be planned and systematically integrated into programmes (Schwab and Oesterle, 2022; Bryan and Recesso, 2006). To conclude, while the VEO app offers features beyond the ones used in the scope of this study, in order for them to be used the reflective tasks need to be designed accordingly and the integration needs to be specifically and carefully planned.

7.1.7 Concluding remarks

To summarize, in the pre-service context VEO tags were used as a way to extend supervisor guidance and scaffold reflective writing. This use of the tags by the supervisor presents a new form of technology integrated guidance that can be used to facilitate reflection. The grouped tag viewing function of VEO allowed pre-service teachers to link different classroom instances of the same phenomena, which facilitated taking an analytical stance for reflection. Independent of the tags, the pre-service teachers having access to the full classroom video allowed them to focus on any aspects of their teaching they chose to. Reflective essay analysis showed that the teachers did not limit their reflections to the tagged instances. Thus, in this context, the tags were guiding but not limiting. An interesting finding is the apparent difference of VEO use in supervisor and peer collaboration. The collaborative aspect appeared to be less guiding and have less of an impact in the peer condition - which can be considered an area for further research.

In both the pre-service and in-service contexts, VEO was found to shape feedback dialogue both through the efficiency of tags for video viewing and due to video evidence shifting the dynamics of post-observation meetings. In the in-service context, the mobility of VEO on a tablet was used as a way to implement a unique observation method which included

recording and interviewing specific students/groups during the lesson. This active video recording technique provided the observed teachers with a unique insight into their students. Finally, it was found that the despite the possible affordances it presents for collaboration, the VEO portal was mainly used for video sharing, thus confirming the need to specifically plan for technology integration.

7.2 Sub RQ2: To what extent does VEO support teachers' reflective practices?

This question is answered through the analysis of the two pre-service case studies. Within the case studies, two forms of analysis were carried out: examining the reflective essays for content and level of reflection and looking at classroom data for evidence of improvement. In accordance with this the discussion section will start with the pre-service teachers' perceptions of VEO's impact on their reflective practices, followed by focus and quality of reflection and concluding with impact on teaching practice.

7.2.1 Pre-service teachers' perception

In their reflective essays the participants briefly wrote about the impact of VEO on their practicum experience. Both participants stated that engaging in video-based reflection increased their awareness of their teaching practice and allowed them to notice aspects that had gone unnoticed – a common finding in the literature (Lofthouse and Birmingham, 2010; Payant, 2014; Kane *et al.*, 2015; Karakaş and Yükselir, 2021). Lale also reported the difference between her initial perception of her first lesson and what she realized through watching the video and supervisor feedback (Schwab and Oesterle, 2022; Rosaen *et al.*, 2008; Snoeyink, 2010). Indeed, Selim emphasized the powerful impact video had as he actually got to see the instances his supervisor was referring to, which facilitated his understanding and acceptance of the feedback (Lofthouse and Birmingham, 2010; Tripp and Rich, 2012). Overall, both participants felt they had benefited from the integration of VEO into their practicum teaching and reported developing their teaching practices.

7.2.2 Focus and quality of reflection

The analysis of the reflective essays was carried out separating focus and quality of reflection (Lane *et al.*, 2014). The focus of reflection was analysed through thematic analysis. While the quality of reflection analysis was carried out through qualitative content analysis implementing the Reflective Framework created within this study. The framework

expanded the reflective levels that some frameworks define as descriptive/surface (Hatton and Smith, 1995; Larrivee, 2008) in order to get a better understanding of how exactly preservice teachers reflect. This expansion led to six separate levels as descriptive, evaluative, explanatory, reasoning, dialogic and transformative.

The value and growth in description

Analysis showed that the two pre-service teachers differed in both their focus and quality of reflection. The majority of Lale's reflective segments were coded in the first three levels of the framework (Descriptive, Evaluative and Explanatory). While segments coded at the Explanatory level formed the majority for her first essay, Descriptive reflection was the most common form in her second essay. Despite this overview of a mainly descriptive form of writing, Lale was able to reach the Dialogic and Transformative levels as well. Looking at changes from her first essay to the second it was observed that the number of descriptive, evaluative, and transformative segments increased. The reflective framework analysis of Lale's essays does not present a linear view of improved quality of reflection, with some forms of reflection increasing and the others decreasing. In terms of quality of reflection, the findings of Lale's case are in line with the common findings in the literature, with multiple studies reporting that pre-service teachers' reflections are generally descriptive and superficial rather than analytical and critical (Parsons and Stephenson, 2005; Watts and Lawson, 2009; Cohen-Sayag and Fischl, 2012). However, a high percentage of segments coded at the Explanatory level shows Lale moving beyond pure description and starting to provide some explanation and possible alternatives to actions. Bain et al. (1999) found that the average characteristic level of reflection of their participants was mostly at level 3 (Relating) of their framework which is a similar level to the Explanatory reflection in this study. Also using Bain et al.'s framework (1999) in a Turkish ELT context, Bener and Yıldız (2019) reached similar findings reporting the average level of reflection to be at level 3. In their study using video annotation for reflection McFadden et al. (2014) also found that more than one thirds of the participants made annotations that were mainly descriptive. In this sense Lale appears to be a typical example of pre-service teacher reflection. Having said that, regarding noticing skills van Es and Sherin (2002) underline the importance of moving away from chronological descriptions and shaping reflections around specific incidents. Although Lale's reflections had a high level of descriptive elements, the writing was rarely

purely chronological. Instead Lale organized her essays around a range of teaching focuses (i.e., classroom management, questioning, feedback) and the descriptions were mostly providing examples of teaching acts from different sections of the lesson. Thus, it can be argued that, although descriptive, this process of selecting relevant classroom incidents and grouping them together through VEO's analytical affordances can provide a fertile base for further reflection.

Looking at the focus of her reflections, Lale's first essay follows the typical pre-service teacher found in literature by largely focusing on classroom management and discipline (Harford, MacRuairc and McCartan, 2010; Cohen-Sayag and Fischl, 2012). Combined with the mostly descriptive style, Lale's reflection pattern fits right into what is referred to as technical reflection (Van Manen, 1977; Valli, 1997). One aspect that should be underlined here is that the reflection guidance provided to the pre-service teachers did not include a focus on classroom management, however discipline was the most frequently used VEO tag for her first lesson. Thus, the focus on classroom management shows the direct impact of the combination of VEO tags and supervisor feedback on Lale's written reflection. Despite the heavy focus on classroom management in her first essay, the main focus of Lale's second essay was questioning and feedback strategies. Indeed, in both essays Lale reflected on a range of teaching practices including feedback, teacher initiation, instruction giving and missed learning opportunities. While the focus was largely on the teacher's acts (Watts and Lawson, 2009), Lale also reflected on a variety of student related aspects including motivation, engagement, unwillingness to participate and the students' use of L1. This is in line with Yesilbursa's (2011b, 2011a) findings as she also found the Turkish ELT students in her study to largely focus on teacher related aspects which was followed by a focus on student behaviour.

Studies report participants experiencing shifts in their perspectives as a result of engaging in reflective practice (Lee, 2007; Calandra *et al.*, 2009), indeed the change and professional growth expected as an outcome of reflection (Dewey, 1933) can be in both observable action and in the form of newly gained perspective (Farrell, 2012). Analysis of Lale's reflective essays showed a perspective shift regarding time management, student response length and student talk. This shift displayed Lale moving away from the survival mode (Watts and Lawson, 2009) and 'knee-jerk response' (Larrivee, 2008, p. 342) type of

reflection, towards a mode where she accepted more responsibility as a teacher. Lale found her time management to be poor in both of her lessons. In her first lesson, activities taking longer than expected caused her to rush to keep up with the lesson plan which resulted in even more issues. However, in her second lesson she reported deciding to alter the lesson plan and not go through with the final activity as the activities taking place 'had potential for talking' (LR2). This shows Lale shifting her focus from strict adherence to the lesson plan to a more flexible approach that puts student learning and language production first. Similarly, regarding student talk, in her first lesson essay Lale reflected at length on how various forms of student talk led to noise, became difficult to manage and was disruptive to the lesson. However, in her second lesson essay she took her context into account – a language classroom – and reflected that a certain level of 'noise' as a result of student talk is acceptable. Finally, reflecting on student response, Lale initially placed all the responsibility on the learner stating that 'if they want to say more, they always can' (LR1). However, her second reflective essay showed a shift in this mindset as she reflected on how she consciously made the decision to ask more open-ended questions or tried to follow up her yes/no questions in order to increase student language production.

To summarize, in terms of quality of reflection, Lale displayed the ability to reach the higher levels of the framework in both essays, although a majority of her reflections remained at the descriptive levels. Despite this finding, Lale focused on a range of teaching strategies and various aspects of student behaviour. The reflective essay analysis also displayed three areas where Lale's perspective shifted, indicating a positive impact of the reflective process. This is especially relevant as descriptive writing coupled with a heavy focus on classroom management is often viewed as surface level reflection (Valli, 1997; Larrivee, 2008) and used to point out the underdeveloped reflective skills of pre-service/beginning teachers. However, Lale's shifting mindset shows reflection, growth and learning is possible even when discipline is the biggest concern. This perhaps also links to and strengthens Ward and McCotter (2004) and Jay and Johnson's (2002) view of descriptive reflection, as they underline the value of describing, stating that it is not a simple reporting of events, rather it involves deliberate thinking (Ward and McCotter, 2004) and 'finding significance in a matter' (Jay and Johnson, 2002, p. 78).

Holistic reflection emerging from a focus on practice

In stark contrast to Lale, Selim's reflective writing rarely had purely descriptive segments. This means he at least added some form of evaluation to describing the instances, this was found to mostly be in the form of evaluating whether things went according to the lesson plan and evaluating his teaching strategies. This finding, shows the impact of expanding the descriptive levels of reflection, as in some frameworks actions of describing and evaluating are grouped together (Hatton and Smith, 1995; Jay and Johnson, 2002; Lee, 2005) which would not allow to uncover these subtle differences. Identifying the pre-service teacher is reflecting at the Evaluative level, gives an understanding that they are providing their stance/judgement on the described instance. This way further scaffolding can be provided by prompting the trainee teacher to reflect on their reasoning for the given evaluation.

In Selim's first essay the majority of the segments were coded as Dialogic reflection (level 5) (see Figure 6.4) – displaying that he was able to step back from events and adopt an inquisitive and analytic perspective looking at what worked and what did not. This shifted to Reasoning (level 4) in his second essay. A comparison of the two essays showed that the frequency of Evaluative and Reasoning segments increased from essay one to two, while Dialogic and Transformative decreased. A possible explanation to this could be a cyclical view of reflection (Ward and McCotter, 2004) where the second essay indicates the process finishing. Selim showed ability of reaching the Transformative level by identifying areas of improvement for his second lesson and displaying learning from reflections in his second essay.

Selim's main reflective focus was also different than Lale, including only a brief focus on classroom management. Reflection topics included a focus on lesson plan adherence, language skills and systems, questioning and feedback strategies. Selim's focus on language skills and systems shares similarities with the Theory level of Farrell's (2015, p. 27) framework as it 'explores and examines the different choices a teacher makes about particular skills that are taught'. This shows him focusing on specific content related to language teaching – a focus that was not present in Lale's reflections. Similar to Lale, while reflecting on questioning and feedback strategies Selim provided numerous examples of the different forms he employed. Reflecting on feedback strategies – which was also the main focus on his first essay – Selim moved beyond examples of feedback strategies he employed

and reflected on both successful and problematic instances and their impact on the students. In the Dialogic coded segments, using the VEO tags, he brought together and linked instances from different sections of the lesson which resulted in a more analytic stance. Overall, the degree of detail and criticality varied amongst the different strategies focused on, with feedback strategies given the most significance.

Selim also included a focus on his learners, reflecting on student affect, communication troubles and their use of L1. The communication trouble instances were written step by step, reflecting on problem-solving and showing the affordances of video in reflecting on interaction (Richards and Farrell, 2005a). Perhaps one of the most salient features of Selim's reflective essays was how much of his teaching principles were uncovered. Although the reflective essays were solely focused on the teaching practice, at the Explanatory and Reasoning forms of reflection Selim's writing revealed several of his assumptions, beliefs and conceptions of teaching and learning. Farrell (2015) places this form of reflection on the second level of his reflective framework and underlines the importance of it stating that the scope of reflection needs to go beyond practice. Describing this as a shortcoming of most reflective frameworks, Farrell states these frameworks mostly guide 'teachers on how to tackle technical issues without looking at the person who is reflecting' (Farrell, 2015, p. 20). Indeed, some researchers have placed reflecting on principles at the core of the reflective process. For instance, Griffiths and Tann (1992) argue that reflection depends on the 'ability to uncover one's own personal theories and make them explicit' (p. 72). Taking a more practical approach, Jay and Johnson (2002) also note the importance of reflecting on personal biases, assumptions and wider societal issues surrounding education, while simultaneously emphasizing the value of reflection as a utilitarian problem-solving approach.

This uncovering of held beliefs is relevant as having knowledge of the principles of teaching and learning a trainee holds, provides a strong basis for further reflection. It is especially noteworthy that this form of reflection came from a process that was mainly focused on observed practice and did not include any guiding/prompting questions to elicit teacher beliefs. This has the potential to provide ways for the promotion of reflection that focuses on both practice and principles. Selim's teaching principles were mostly visible in segments coded as Explanatory and Reasoning which are both driven by providing reasoning and

justification to varying extents. Based on this, perhaps incorporating questions that prompt teachers to reflect on their reasoning behind teaching acts and evaluations in combination with video-based reflection is a way forward to a more holistic form of reflection (Farrell, 2015).

To summarize, in his video-based reflective essays Selim reflected on a range of teaching subjects and learner related aspects in a generally Dialogic manner which showed him taking a questioning and analytic stance. The lack of pure descriptions and not having a big focus on classroom management meant Selim differed from the stereotypical pre-service teacher (Hatton and Smith, 1995; Watts and Lawson, 2009; Cohen-Sayag and Fischl, 2012). Individual differences in focus and level of reflection have also been found in other studies (Bain *et al.*, 1999; McFadden *et al.*, 2014) and some researchers attribute this to the difference between students' predisposition for reflection (Korthagen, 1985; LaBoskey, 1993b; Korthagen and Wubbels, 1995). While this might be a possible explanation to the different reflection styles of Lale and Selim, unfortunately, predisposition for reflection was not examined in this study thus links to this cannot be made.

7.2.3 Impact on teaching practice

In line with their reflective essays the two case study participants focused on the improvement of different aspects of their teaching. While Lale's focus was on classroom management, Selim's was on feedback practices. In both cases, the post-observation feedback meeting focused on these areas of improvement with the supervisor advising the trainees to especially reflect on discipline and feedback tagged instances, respectively. Similarly, it was found that one specific problematic instance came up in multiple different sections of both of the participants' reflective essays – indicating the importance placed on it.

In line with the literature on beginning teachers' areas of struggle (see Evertson and Weinstein, 2011; Jones, 2011), Lale experienced issues with classroom management. She had trouble getting the students' attention and insisted on using the same management techniques that did not serve her in the moment. As previously mentioned, her post-observation meeting focused primarily on discipline instances and her supervisor gave her practical advice by mentioning a variety of different classroom management techniques. In her reflective essay Lale wrote about one specific instance in a Dialogic manner, reflecting

on what worked, what did not, and what alternative action she could have taken. Analysis of her second lesson classroom data and reflective essay showed Lale dealing with a disruptive instance in a much more skilful manner. Mainly she appeared to take an active stance in classroom management by attending to the issue and shifting strategies to resolve it rather than insisting on carrying on with the task in hand with the hopes that students would quiet themselves down. In Larrivee's words, she practiced 'remaining fluid' (2011, p. 990) regarding management strategies.

In Selim's case one of the issues that came up during the post-observation meeting was Selim not eliciting the correct pronunciation from students after providing feedback. Selim provided implicit feedback in recast form (Lyster and Ranta, 1997) and did not pay much attention to the lack of uptake (Ellis, Basturkmen and Loewen, 2001). Examining two instances where this took place, the supervisor underlined the pitfalls of positive feedback and importance of eliciting correct form. Reflecting on one specific instance in three separate sections of his essay, Selim analysed his choice of action from different perspectives taking into account both student learning and student affect. In his second reflective essay Selim did not reflect much on his feedback practices, however analysis of classroom data showed that he paid a lot more attention to the absence of uptake as he insisted on getting the correct pronunciation from students in several instances. Although the significance of uptake and its link to student learning is a contentious matter (Lyster, Saito and Sato, 2013), Selim displaying this change of behaviour shows him paying more attention to student behaviour and learning, as well as the impact of VEO-based reflection.

Evidencing improvement in both pre-service teachers' teaching practices is a significant finding as reflection research has long been criticized for the lack of connection between promotion of reflective practice and its impact on teaching skills (Korthagen and Wubbels, 1995; Gaudin and Chaliès, 2015). Research into video-based reflection has mostly focused on either teachers' accounts of the reflective process or analysis of written reflection (Gaudin and Chaliès, 2015) and the need for studies investigating the link between reflection and practice has been reiterated by several researchers (Tripp and Rich, 2012; Tülüce and Çeçen, 2016; Baecher *et al.*, 2018). Thus, this study offers new perspective by adding classroom data analysis to provide a data led understanding (Mann and Walsh, 2017) of the impact of reflection. In their study, Cohen-Sayag and Fischl (2012) found the link

between reflection and teaching practice to be unclear and summarized their findings by stating 'there can be an improvement in reflective writing without improvement in teaching and vice versa' (Cohen-Sayag and Fischl, 2012, p. 32). However, there appeared to be some form of a link as the researchers observed that students reflecting in a critical manner also showed improvement in their teaching. Similarly in this study both participants were able to reach Dialogic and Transformative levels of reflection, especially when reflecting on their areas in need of improvement. Both participants showing improvement in their practice indicates that reflection is beneficial and has practical implications even when their reflective writing does not show a linear improvement and is not largely at the higher levels of reflection. While Lale's improvement in classroom management is transferable to the wider field of education; Selim's development in feedback strategies has direct implications for the field of language teaching (Hüttner, 2019) and provides a great example of how video-based reflection can have practical implications for language teachers as well as why it needs to be further incorporated in language teacher education (Mann and Walsh, 2017).

To summarize, engaging in VEO-based reflection supported both the participants' reflective practice and teaching practice. VEO-tagged lesson recordings combined with supervisor guidance resulted in both pre-service teachers' producing detailed reflective essays focusing on a range of teaching matters including various questioning and feedback strategies, student behaviour and L1 use, and communication troubles. The participants displayed ability to reflect at the higher levels to a varying degree; and even when the quality of reflection remained mostly descriptive in one participant's case, the impact of the reflective process was visible in shifts in perspective. Indeed, while Farrell (2012) underlines that the impact of reflection should not be confined to observable action, the participants of Calandra et al. (2009) reported changes in their perspective as a result of reflection, this study strengthened these accounts by showing it is possible through written reflection analysis. Both participants displaying improvement in their teaching practices is a promising finding for future reflection research. One aspect contributing to this, is the fact that this improvement was seen in only two lessons with the participants not carrying out any teaching in between. One could argue that improvement of practice is already expected in a teaching practicum context and question the influence of the added VEO-based reflection element. The present research cannot provide a definitive answer to this as it was not

designed as a comparative experimental study with one group using VEO and another one engaging in the regular practicum process. However, the pre-service teachers' accounts on how the VEO-integration shaped their reflective writings, allowed them to notice aspects of their teaching they were unaware of and facilitated better understanding of feedback, indicates that the impact of VEO cannot be overlooked.

7.2.4 Implications on future reflective studies

Combining the analysis of reflective essays and the impact VEO-based reflection had on teaching practices brings about questions regarding how reflective practice is analysed. This is especially relevant for the case of Lale as with her largely descriptive writing and heavy focus on classroom management, Lale would be identified to be at a technical/surface level of reflection (Valli, 1997; Larrivee, 2008) and in need of plenty of guidance to reach the possibly more desirable forms of reflection. While it stands true that there is plenty of room for Lale to develop her reflective skills, this study shows that both shifts in perspective and changes in teaching practice can occur at this level. This not only supports Mann and Walsh's (2013) call for more data-led accounts of reflection, but also potentially calls for changes in how reflective writing is analysed. Many studies carrying out analysis of written reflection – as did this one – report on the participants' reflective level displayed in the majority of segments/entries (Bain et al., 1999; Orland-Barak, 2005; Watts and Lawson, 2009; Yesilbursa, 2011a; Turhan and Kirkgoz, 2018). However, if reflective practice is seen as a skill, perhaps the highest level the teacher is able to reach is of greater importance. Thus, for instance in Lale's case, emphasis should be placed on the fact that she reached both Dialogic and Transformative levels of reflection which indicates her ability to approach her teaching analytically.

7.3 Sub RQ3: What are the advantages and disadvantages of using VEO?

This question is answered directly drawing from the thematic analysis presented in Chapter 4. Some of the findings relating to affordances overlap with the uses of VEO covered in the discussion section of the first sub research question, these will be kept brief in this section. The discussion will be presented under three headings: affordances of video, affordances of VEO and drawbacks of VEO.

7.3.1 Affordances of video-based reflection

The affordances of video that came up in this study reinforce the findings of the wider literature of video-based reflection and teacher development studies. The three themes that emerged from the data are the power of self-observation, focus on student learning and increased efficiency of feedback meetings. The power of self-observation through video has been reported by several previous studies (Sherin, 2004b; Akcan, 2010) and is seen as a well-established affordance of video (Tripp and Rich, 2012). In agreement with the literature, the participants in this study commented on video allowing them to really 'see' their practice (Tripp and Rich, 2012) with all its strengths and weaknesses. Getting an outsider's view was seen as powerful especially as the participants noted not being able to notice or recall every aspect of their lesson (Kaneko-Marques, 2015; Hüttner, 2019). Another facet of video self-observation's power lies in its objectivity (Payant, 2014; Çelik, Baran and Sert, 2018) as participants underlined that viewing one's own practice allowed them to bypass any shortcomings, biases or judgements of the observer.

Another advantage of video that came up was allowing for a focus on student learning and behaviour. Video is seen as unique in its ability to capture the complexity of classroom teaching (Brophy, 2004b). Within this it also provides teachers with an otherwise inaccessible perspective into student learning and behaviour (Richards and Farrell, 2005a). In this study, particularly the in-service teachers commented on this affordance of video. This was seen as especially impactful as it was combined with the active video recording use of VEO, previously discussed in the first section of the discussion.

A final affordance of video mentioned was the increased efficiency of feedback meetings due to video use. Marsh and Mitchell (2014) list using video as a prompt for further collaborative discussion and reflection as one its affordances. This view was shared by the participants in this study. One specific aspect of this mentioned was video acting as objective evidence (Lofthouse and Birmingham, 2010) and in doing so both eliminating the dependency on recollection (Kaneko-Marques, 2015) and shifting the discussion dynamic to a mode where both parties can actively participate in the lesson analysis (Batlle and Seedhouse, 2022; Çelik, Baran and Sert, 2018; Crichton, Edmett and Mann, 2019).

7.3.2 Affordances of VEO for reflective practice

The affordances of VEO section is intentionally separated as it covers the affordances that not just relate to video as a medium but are specific to the features that come with the Video Enhanced Observation tool. These will be presented as the affordances of the tagging feature and practical affordances.

The tagging feature of the VEO app was found useful as it facilitated guidance for improvement and reflection, provided ease of video viewing and allowed for flexibility in focus and timing. In addition to these, the quick tag specifically was noted as a handy feature of the tag design. Tags facilitating guidance for improvement and reflection has been discussed in the first section of the discussion under the VEO uses of tags extending supervisor guidance and scaffolding reflective writing. To reiterate the findings, participants mentioned the tag sets acting as a framework of focus that helped guide their reflection and teaching. This is crucial as guidance is seen as a vital element of facilitating reflection, especially with pre-service teachers (Blomberg *et al.*, 2013). Linked to this, some participants also commented on the flexibility provided by being able to choose and create one's own tag set. Although in this study the pre-service teachers only had the option of selecting amongst three tag sets, other VEO-based studies have made use of this feature by asking participants to create their own tag set (Körkkö, Kyrö-Ämmälä and Turunen, 2022; Schwab and Oesterle, 2022).

Tags providing ease of video viewing was mentioned for its time-saving affordance. Although 'video affords the luxury of time' (Sherin, 2004a, p. 13) for viewing and analysis, when it comes to collaborative viewing with a supervisor or colleague it can be difficult to carve out the time to review a whole lesson. This was especially the case with the Turkish cohort as the supervisor was responsible for 20 pre-service teachers within their busy schedule, which meant post-observation meetings lasting around 15 minutes on average. Studies have had pre-service teachers select clips of the teaching videos to discuss with supervisors (Calandra *et al.*, 2006) or have prioritized peer collaboration and discussion (Körkkö, Kyrö-Ämmälä and Turunen, 2022; Rhine and Bryant, 2007). However, with VEO recordings, the tags can be used to jump to the specific and critical moments of the lesson without having to spend precious time either watching the whole video or searching for

specific instances. Although it should be noted that the beneficial use of this feature heavily depends on skilful and efficient tagging.

Linked to the notion of efficient tagging, participants mentioned making great use of the quick tag function which simply allows the user to timestamp the video without having to select a specific tag. Although the tags were seen as beneficial, some participants noted feeling overwhelmed with the fast-paced decision making required to tag a live lesson which is where the quick tag came in handy. Building up on this, one final affordance that came up regarding tags was the ability to tag retrospectively on the VEO portal. Although this feature was not used extensively, one participant noted using it to check and correct their tags. It was also seen as a viable alternative to those that were overwhelmed by live tagging.

Separate from the tagging affordances, the participants also mentioned practical affordances of the VEO app, these included ease of sharing and viewing, mobility and time saving factors. The ease of sharing and viewing theme relates to the technical ease of sharing the video file. Uploading the recorded video to the VEO portal and sharing it with whomever the user would like to give access to are actions that can be carried out in a few minutes. Without this system in place, using video recordings came with the added tasks of converting the file format, uploading it to a suitable transfer site or on a portable form of storage. Indeed, some studies note these tasks becoming cumbersome for their participants (Rhine and Bryant, 2007; Lofthouse and Birmingham, 2010). Of course, these practical affordances are owed to the developments in digital videography and technology in general (Seidel et al., 2011; Blomberg et al., 2013). The mobility of VEO that comes with its tablet app format became a great advantage in capturing student voice, as it has been previously discussed in the active video recording to capture student voice section. Finally, the VEO app was also found to afford teacher trainers with time. While time related affordances have been mentioned in the ease of video viewing thanks to tags section, one participant also mentioned how getting pre-service teachers to record their own lessons and share the video with their supervisor can ease the teacher trainer's workload. Indeed, the time saving factor of video was one of the first driving forces behind using video for classroom observations (Sherin, 2004b), this finding affirms that this affordance still stands true.

7.3.3 Limitations of VEO for video-based reflective practice

The challenges participants experienced with VEO were far less than the affordances. The topics that came up were VEO's learning curve, issues with live tagging, tag subjectivity, technical shortcomings and VEO being difficult for individual use. VEO's learning curve presented a slight challenge for the participants as they had to train in using the app and doing live tagging. Having said that, this was not mentioned as a huge factor as participants were comfortable using the app after trying it out for a couple of times. Having to be introduced to and trained in how to use a new app or platform is expected (Rich and Hannafin, 2009), thus this challenge is not specific to VEO but comes with the territory of implementing new technology.

Moving onto a set of challenges that were VEO specific are the issues participants experienced with live tagging and tag subjectivity. Some participants mentioned experiencing overwhelm while trying to live tag a lesson during observation. They noted having to decide which tag to click on becoming a source of confusion and found themselves losing track of the lesson while trying to decide. This confusion was not only mentioned for the tags themselves, but also for the rating attributes (+, ?, -) of the tags. Similarly, the participants in Schwab and Oesterle's (2022) study also reported experiencing confusion with the tags. Some participants in this study noted overcoming this issue by deciding to use the positive evaluation for all tags and using the quick tag in the case of tag confusion. Related to possible tag confusion, some participants also mentioned the caveat of over tagging a video and suggested a narrowed down tag set might be more beneficial and less confusing. However contrasting with this, the participants in Körkkö et al.'s (2019) study noted finding the tag set they used to be too narrow in focus. Thus, further research is needed to determine what number of tags works the best.

Another issue linked to live tagging was observers feeling the need to take notes during observation. Also found in Çelik et al.'s (2018) study, one of the observers mentioned wanting to take notes during the VEO lesson observation, however struggling to find an efficient way to do so, as taking pen and paper notes while operating the tablet proved to be quite tricky. At the time of data collection the option to take notes in the app while live tagging was not available, however this has since become a feature that observers can use

(Miller and Haines, 2022b), thus looking into the efficiency of this feature can also be a subject for future research.

The final drawback relating to tags were their subjectivity and thus the resulting subjectivity of the app statistics. The participants in this study did not rely on the app statistics for their lesson analysis, thus this drawback was mentioned more as something to be cautious about rather than a challenge in practical use. Linked to the confusions experienced during live tagging, some participants underlined the importance of efficient tagging if the app were to be used for assessment purposes where the statistics would play a bigger role.

The final two themes of challenges in using VEO were some technical shortcomings and difficulty of individual use. The difficulty of individual use was mentioned by one of the participants as they stated that without a collaborating partner using VEO to record one's lesson would become a much more cumbersome process. Indeed, this is one of the reasons behind Fadde et al. (2009) calling for active videotaping rather than using an unmanned video, as in their experience having to set up the video camera created added distraction for the teacher. Regarding technical shortcomings, the only one mentioned was issues with sound quality as one participant noted not being able to hear the teacher in some instances of the recording. This is of course not a shortcoming of the app per say but the tablet computer (iPad) it was used on. This drawback was also mentioned by the participants of Schwab and Oesterle (2022), although as the researchers noted newer versions of these tablets provide a possible solution to this shortcoming.

To summarize, through answering the third sub research question, this study confirms several of the affordances of using video for self-analysis and development found in the literature. These include video allowing teachers to actually see their practice, the opportunity to observe student behaviour and learning, and video increasing the efficiency of feedback meetings. While video-based post-observation meetings create a more equal dynamic between the observer and the observed teacher; VEO brings an additional affordance to this by structuring the dialogue through tags which also can offer a time-saving factor. One highly relevant affordance of the tags include how they can be used to guide and facilitate reflection, this finding shows how VEO can add onto the affordances of video as it goes beyond a technical tool to one that can integrate pedagogy through tags. Despite these affordances of tags, participants also mentioned struggling with tag selection

during live observation which some overcame by using the quick tag function. Thus, similar to any technology, the tags offered unique affordances, but also came with a few practical issues. On the practical use of VEO, the study found the ease of video sharing and the mobility of VEO on a tablet to be affordances, while the sound quality through tablets was seen as a drawback.

Chapter 8 Conclusions

8.1 Summary of the Study

Reflective practice is seen as an integral part of professional development and a way to bridge theory and practice (Loughran, 2002). Incorporated into many fields, reflective practice is an important element of teacher education and this status is also echoed in second language teacher education (Farrell, 2019a). Reflective practice has been conducted using various methods including reflective writing, classroom observation, peer observation and discussion, and audio and video recordings. Video recordings have increasingly been used for reflection due to its capacity to provide teachers with an objective and detailed account of their lessons (Tripp and Rich, 2012). Video annotation tools also have been implemented to develop reflective practices (Rich and Hannafin, 2009). Despite the extensive literature on reflection and video's use for reflection, several gaps in and shortcomings of current research have been identified. These are listed below:

- the lack of clarity regarding what is meant by reflection (Farrell, 2016)
- the lack of detail in describing the processes involved in video-based reflection (Baecher *et al.*, 2018)
- the heavy focus on reflection's perceived affordances (Akbari, 2007)
- the lack of studies investigating the link between reflection and teaching practice (Gaudin and Chaliès, 2015)

In addition to these general issues, the field of English language teaching is lacking in video-based reflection studies with the majority of these studies being conducted in the fields of mathematics and science education (Hüttner, 2019). Linked to this, reflection's status in English language teaching has also been criticized as being overly focused on written methods, with a call being made for the incorporation of more collaborative and dialogue-based forms of reflection (Walsh and Mann, 2015).

Therefore, the current case study set out to examine the use of a video observation tool (VEO) in pre-service and in-service contexts. Two individual teachers using VEO in their preservice English language teacher education programme in Turkey were selected to provide a detailed understanding of a) how VEO is used for reflection, b) what the pre-service teachers reflect on and how they reflect, c) the impact of VEO-based observations on their

reflective and teaching practices. A wider data set including in-service teachers using VEO was analysed to examine how VEO can be integrated into in-service contexts and the advantages and disadvantages of using VEO for reflection. The theoretical framework of this study was based on the constructivist paradigm as the case study set out to explore how teachers engage in VEO-based reflection in their own real-life contexts. Data for the case studies included VEO recorded lessons, VEO tag use, lesson plans, post-lesson feedback meeting audio recordings, written reflective essays and interviews. Multiple data sources allowed for rich case descriptions. Reflective essays were the main data source, and these were analysed both for focus of reflection and quality of reflection. The focus of reflection analysis was carried out using thematic analysis, whereas for the quality of reflection the steps of qualitative content analysis was followed to create a Reflective Framework to analyse video-observation based written reflections. The data examining the wider VEO use including in-service teachers was in the form of interviews which were analysed using thematic analysis.

8.2 Revisiting the Research Questions

This section will briefly revisit the research questions guiding this study, starting with the sub research questions, and concluding with the overarching question.

8.2.1 Research sub-question 1

How do teachers use VEO for their reflective practices?

Teachers' use of VEO emerging from the whole data set is presented under five themes with a final section overviewing the unused features of VEO:

Teacher trainer used VEO tags to extend guidance

In the pre-service Turkish context, the practicum supervisor observed and tagged the trainee teachers' first practicum lessons using the tag sets developed for language teaching. This was followed by a short post-observation meeting where the supervisor provided feedback referring to some of the tagged instances, then the VEO recordings were shared with the pre-service teachers for their individual reflection. Examination of the post-observation meetings showed that the supervisor identified specific tags that needed the pre-service teachers' further attention and advised them to especially focus on these instances. By using VEO this way the supervisor provided the pre-service teachers with a

lesson video tagged through their perspective as the observer thus making it clear which areas of the lesson they focused on. Combined with this, the specific tags identified in the post-observation meeting gave the pre-service teachers further guidance and scaffolded their individual reflection.

VEO tags scaffolded reflective writing

Linked with the supervisor guidance provided through the tags, analysis of the reflective essays also showed the impact of the VEO tags on the pre-service teachers' writing. Tags were found to scaffold reflective writing in two ways: by providing a framework for reflection and through the tag reviewing functions present in the VEO app. The tag sets specifically designed for language teaching provided a framework of focus for the preservice teachers as they noted the tags made them focus on the relevant aspects of their teaching. The tag reviewing function of the VEO app/portal allows users to review all of the instances tagged under a specific tag/sub-tag consecutively. While one of the participants noted making use of this function, the impact of it was also present in the reflective writing as in some sections the pre-service teachers brought together classroom instances from different phases of the lesson that were timestamped with the same tag. Reflecting this way through the tags allowed them to link, compare and contrast different classroom instances which facilitated an analytic stance.

Differences between supervisor and peer observation

The Turkish pre-service teachers completed one cycle of lesson observation with their supervisor and a second one with their peer partner. While VEO tags were used as extending the supervisor's guidance and shaping the reflective essays, this impact was less visible in the peer observation cycle. The peer partners did not provide further guidance through tags and in one of the cases the pre-service teacher wrote their second reflective essay chronologically – appearing to make less use of the tags. While peer observation was not a focus of this study, this observed difference is notable for further research.

Observers used VEO tags to structure feedback dialogue

The use of VEO to shape feedback dialogue was visible in both the pre-service and in-service contexts. Participants from both contexts emphasized the value in being able to see their

practice during the feedback meeting and not having to rely on their own memory or the observer's perspective. This allowed for both parties to contribute equally to the lesson analysis process. Additionally, the tags were used to jump to specific classroom instances thus facilitating the feedback dialogue by removing the need for either reviewing the whole lesson video or having to search for specific instances.

This use of VEO was specific to the UK high school participants. Moving beyond traditional observation methods, the observer in this context made use of the mobility of the VEO tablet and walked around the classroom while recording. Through this use, they were able to get close to student pairs/groups and record how they were engaging with certain tasks. The observer also questioned students to see if they were able to follow the lesson/understand the instructions. This use of VEO provided the teachers with a whole new perspective on their students.

Teachers do not always capitalise on all affordances of VEO

In addition to all the ways VEO was used for reflective practices, outlining the features that were not used was seen as a useful practice to emphasize the need for structural integration of technology into teaching practices. VEO was predominantly used in person in both contexts with the observer doing the live tagging and the post-observation meetings taking place in person. Only the individual video viewing was carried out through the VEO portal. Despite not being used this way, the VEO portal allows for further online collaboration between teachers by providing a space for sharing and commenting on each other's practice. The online element of not being used in this study further emphasizes the need for technology to be integrated into systems.

8.2.2 Research sub-question 2

To what extent does VEO support teachers' reflective practices and professional development?

This question was answered through the case study analysis of the two pre-service teachers from the Turkish context. First of all, reflective essay data showed that teachers benefitted

from the VEO integration into their practicum. Viewing lesson videos allowed them to notice aspects of their teaching they were unaware of and develop their teaching practices.

Analysis of the focus and quality of reflection showed that both cases were able to reach Dialogic and Transformative levels of the framework. While one trainee wrote predominantly descriptive essays, the second was found to reflect in a more connected and analytic manner. In terms of reflection focus both participants focused on a range of subjects including classroom management, feedback strategies, questioning, students' L1 use and communication troubles. The primary focus of reflection was classroom management and discipline for the first case and feedback practices for the second case. The impact of VEO tags was visible both in the essay focus and in the structure as mentioned above. Although the analysis of reflective writing did not show a linear improvement in quality, both participants produced long and detailed reflections using time stamps to refer to specific instances and displayed the ability to provide reasoning, identify areas of development and find alternative actions to take.

Analysis of classroom data showed both participants displayed improvement in their respective areas of focus in their reflections: classroom management and feedback strategies. This finding is significant as it shows changes in practice can occur even when a) VEO observation is employed only twice and b) when the reflective writing is mostly descriptive. Conducting an original analysis through linking classroom data and reflective writing, this study showed that despite strong emphasis in the literature to promote deeper reflection in essays, changes in practice can occur even when the reflective writing is not mostly critical.

8.2.3 Research sub-question 3

What are the advantages and disadvantages of using VEO?

The thematic analysis of both the interviews and some sections of the reflective essays answered this sub question. The findings were presented under the affordances of video, the affordances of VEO and the limitations of VEO. The affordances of video section reinforced the findings of the wider literature as participants reported the power of self-observation, video allowing a focus on student learning and increased efficiency of feedback meetings. VEO-specific affordances were tag related and practical affordances. Overlapping

with the answer to research sub-question 1, the tags were found useful as they facilitated professional development and reflection through providing a framework of focus. They also provided ease of video viewing and the tag set customization feature allowed for flexibility in focus. The practical affordances of VEO were reported as the ease of sharing and viewing videos through the VEO portal and the time-saving this feature provided as well as the mobility of the app on a tablet. Limitations of VEO were far less than the affordances. These included the training required to get used to live tagging, the possibility of live tagging becoming overwhelming in the moment, the subjectivity of the tags and thus the app statistics, technical shortcomings of the iPad in terms of audio and video quality and possible difficulty of using VEO individually.

The affordance of tags as a guiding framework is of great significance as it provides a new form of technology integrated guidance to facilitate teacher reflection. The practical affordances of VEO can certainly mean easier integration of video-based reflection into existing systems, due to its adaptability and time saving features. While some of the limitations can be overcome through systematic integration and regular use, the technical shortcomings are dependent on the users' technology access.

8.2.4 Overarching research question

Does VEO act as a catalyst for dialogic reflection and deep understanding of pedagogy and professional practice? If so, how?

VEO is able to act as a catalyst for dialogic reflection and understanding of pedagogy and professional practice. In the case of the pre-service teachers, this is accomplished through a) the use of a subject specific tag set (language teaching), b) the supervisor observing and tagging lessons using VEO, c) VEO being incorporated into the post-observation meeting with tags shaping the dialogue and d) tags providing further guidance and scaffolding for individual reflection. Through this process pre-service teachers were able to focus on a range of subjects in their reflections, reflect in a dialogic manner using the tags and show improvement in their practice. For the in-service teachers, VEO was found to facilitate reflective dialogue by shifting the dynamics of the post-observation meeting through the affordances of video and the structuring of the tags.

8.3 Implications

8.3.1 A model for a VEO-integrated practicum in pre-service teacher education

Through answering the overarching research question, this study is able to produce a model for teacher educators to integrate VEO into the pre-service teacher education practicum:

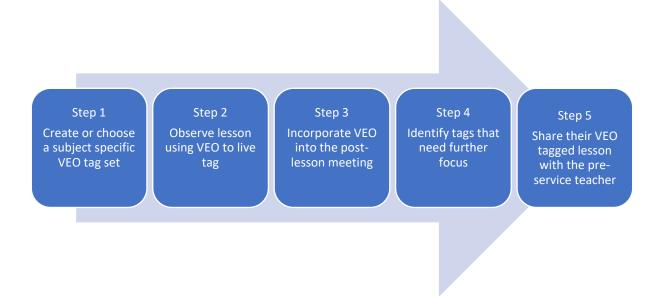


Figure 8.1 Model for integrating VEO into practicum courses in pre-service teacher education

The VEO usage in this study showed that implementing this model provides the pre-service teachers with the necessary guidance for them to engage in individual reflection. The tag set chosen in Step 1 works as a framework for reflection, providing the trainee teachers with a number of relevant aspects of teaching. The supervisor tagging the trainee's lesson in Step 2 links the tag set framework to the trainee's real life teaching practice. Incorporating VEO into the post-lesson observation allows the supervisor to display this link by focusing on critical instances. Using VEO for feedback also provides the affordances of the trainee teacher seeing their practice and both parties having access to video evidence to refer to. Identifying specific tags for further reflection in Step 4 gives the trainee teacher a starting point for their reflection. Following step 5 of the model, the pre-service teachers in this study wrote reflective essays which showed them engaging in self-analysis and reflecting on a wide range of topics. This can be implemented in programmes where reflective writing is an existing element or alternatively step 6 can be some form of dialogic reflection after the pre-service teachers watch their own lesson video. This study showed that through integrating VEO into the practicum in this way, pre-service teachers can display

improvement in their teaching practices which speaks to the effectiveness of this VEO integrated model.

The model presented in Figure 7.1 provides significant guidance to pre-service teachers with the supervisor carrying out the observation and tagging. While it can be argued that this level of guidance does not allow space for pre-service teachers to develop their own noticing, self-analysis and reflection skills, numerous studies have emphasized novice teachers' need for guidance in reflection (Bryan and Recesso, 2006; Lee, 2007; Lai and Calandra, 2010). Studies have also reported pre-service teachers overly focusing on superficial aspects of their teaching when asked to reflect such as the tone of their voice, their posture or any personal mannerisms (Snoeyink, 2010). In contrast, the participants in this study did not engage in such forms of reflection, which shows the effectiveness of the use of tags in framing pre-service teachers' focus. It is also worth reiterating that the two pre-service teachers moved beyond the tagged instances in their reflective essays which further strengthens the idea of tags acting as a guiding starting point rather than a limiting rigid structure.

Practically speaking while this format does not lighten the practicum supervisor's workload, it is safe to assume it can be easily integrated into the practicum structure as lesson observations and post-observation meetings are current elements of the system. Adding the element of video-based observation to the existing structure leads to a much more efficient practicum experience which is crucial in cases like Turkey where pre-service students feel their practical training is lacking (Öztürk and Aydın, 2019).

While the cases in this study are from the Turkish context, this model can be applicable in any similar contexts where video observation is not currently a part of the system.

Experiencing the affordances of VEO integrated observation is likely to lead to its further incorporation.

8.3.2 Theoretical implications on reflection analysis

Following a common method in the literature of analysing reflective writing (Ward and McCotter, 2004; Lee, 2005; Yesilbursa, 2011a), this study examined pre-service teachers' quality of reflection by carrying out an analysis based on reflection levels. In section 3.8, a new framework for analysing reflection levels is proposed based on the current data set and

existing frameworks in the literature in order to best represent the data in hand. The new framework enables researchers (1) to see the value in descriptions (Jay and Johnson, 2002; Ward and McCotter, 2004), (2) expand and provide detail into descriptive writing in subcategories of pure description, evaluation, and explanatory, and (3) analyse focus and quality of reflection separately.

Using this framework in combination with a thematic analysis to look at reflection focus and classroom data analysis to investigate improvement in practice led to a number of findings that could have implications for further reflection analysis:

- pre-service teachers displayed the ability to reflect on their practice in an analytic
 manner and identify areas of improvement
 - this was the case despite the participants' overall reflection levels differing with one writing in a mostly descriptive manner and the other supporting their reflections with providing more reasoning and taking into account different perspectives
- pre-service teachers reflected on a range of teaching issues with one focusing mostly
 on classroom management and the other on feedback practices
- pre-service teachers showed improvement in their teaching practices in the areas
 they identified as in need for development

These findings regarding reflective writing and teaching practice show that, contrary to the suggestions of previous literature, one does not need to reflect mostly at the 'higher' levels and on topics beyond the instructional elements of teaching to display improvement and change. Looking at the link between reflection and practice, Cohen-Sayag and Fischl (2012) noted that while they did not find a direct link between improvement in reflective writing and improvement in practice, participants reaching the higher levels of reflection showed change in their practice. This also appears to be the case in this study. If indeed the purpose of reflection is for professional development, this calls for two possible shifts in future reflection studies: moving the primary focus from reflective writing to classroom data and changing the way reflective writing analysis is reported.

The two cases in this study showed that solely looking at reflective writing provides an incomplete picture regarding the impact of reflection, thus supporting the call of Walsh and

Mann (2015) an increased focus on audio/video/interactional data appears to be the way forward to gain a better understanding of reflective practice. This does not intend to invalidate the value of reflective writing as this study also showed that the analysis of written reflection uncovered shifts in teachers' perspectives and valuable information on the teachers' beliefs and attitudes towards teaching. However, studies analysing the quality/level of reflection tend to report on what level the majority of reflective segments/entries were coded in (Bain *et al.*, 1999; Orland-Barak, 2005; Watts and Lawson, 2009; Yesilbursa, 2011a; Turhan and Kirkgoz, 2018). This study argues that greater emphasis should be placed on the highest-level teachers are able to display, rather than what forms the majority of their writing. Reporting this way puts the focus on what the teacher is able to achieve in terms of reflective ability, without making the reflective writing as a whole the focus of attention (Mann and Walsh, 2017).

8.4 Limitations

This study has a number of limitations related to the study design and data collection issues. Designed as a case study, for the pre-service context, the study mainly focused on two individual pre-service ELT students in the Turkish context which might be perceived as a narrow contextual focus. Weaknesses inherent in case studies mean they cannot make positivistic generalizations; however, they offer rich descriptions and insights which cannot be gained otherwise – as was the intention of this interpretivist study. Future research can now test the new analytical reflective practice framework and the VEO integration model in other contexts.

A number of challenges were experienced at the design stages of this study, which provide valuable insight for future research. First of all, the initial study design intended to include an in-depth analysis of an in-service teacher's VEO use as well. However, this was not possible either due to participants recording their lessons only once which did not provide enough data to investigate improvements in practice, or participants being unable to share their videos with the researcher due to access restrictions of their organization. Second, in the original research design I aimed to investigate the longitudinal use of VEO from preservice teacher education into the first year of in-service teaching. Access issues came up for this version as well, with three teachers from the Turkish context showing willingness to participate in the second phase of the study yet having to withdraw due to their

organizations being unwilling to allow video recordings of the lessons. While these issues limited the study design to its current state, it is also something to keep in mind for future video-based study designs. As Lofthouse and Birmingham (2010) cautioned and as experienced in this study, getting permission to carry out video recordings or even getting access to recorded videos can be a tricky ordeal. It is likely that this would have been easier if the researcher had insider access to an organization, which was not the case for this study.

8.5 Recommendations for Future Research

The analysis, findings and limitations of this study open up various directions for future research. First of all, based on the study limitations, future research can carry out a similar design with in-service teachers in order to examine how VEO-based reflection changes at that level. Additionally, studies conducted in different contexts will also contribute to the wider literature of video-based reflection for language teachers.

Reflection in general and video based reflection can be carried out employing a number of different methods (Tripp and Rich, 2012), this study combined video-based dialogue with individual written reflection. It would be interesting to see what sort of impact different methods have, for instance extending the dialogue and removing the written reflection. Also linked with written reflection, studies have found response journals and providing feedback to teachers' reflective journals to be useful ways to improve reflection (Bain *et al.*, 2002; Lee, 2007). Such an element was not included in the present study, however analysis of the reflective essays showed great opportunity for reflection to be deepened/extended via prompts. Thus, it would be interesting to investigate the combination of video-based written reflections and prompting feedback on reflective writing.

As previously discussed, the VEO use with the pre-service teachers in this study included significant guidance. An interesting future avenue for research would be to see if after being scaffolded for the video-analysis and individual reflection, the pre-service teachers are able to independently engage in video self-analysis and reflection without this level of guidance. This would be similar to Sherin and van Es's (2009) study where they explored if the influences of their video club continued outside of the club context. Examining if engaging in this guided VEO-based observation process improves teachers' noticing and reflective

abilities would be highly relevant. As while the participants in this study displayed an ability to reflect and improve their practice with guidance, being able to notice relevant classroom instances and reflect on them are skills needed for continuous professional development.

One final avenue for future research that presented itself from this study is the difference between supervisor and peer observation. In the case studies, supervisor guidance appeared to be more impactful on the pre-service teachers' reflective writing, while studies on peer observation and collaboration report on its benefits (see Rhine and Bryant, 2007). Further research into peer collaboration in the context of video-based reflection would increase our understanding of what form of guidance is most beneficial for improving teachers' reflective practice and professional development.

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Appendix A



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VEO (Video Enhanced Observation) for Professional Development Project Information Sheet

Full title of the project: Using a video tagging application (VEO) to support professional development: tracking the development of teachers' reflective practices in the transition from the teacher training year to the initial teaching year

Researcher: Saziye Savaskan

You are invited to take part in a research project conducted by a PhD student in Newcastle University. Please take your time to read and fully understand the following information on the project before you decide to participate.

Purpose and Aims of the Research

The project looks into the use of VEO (Video Enhanced Observation), a video observation application, for reflective purposes. The VEO app was designed at Newcastle University as a tool for reflection that can be used in various fields including education. It aims to create a network of good practice via video tagging. The app enables the user to tag significant moments while recording a lesson or practice and once the recording and tagging is done, the tags can be viewed as statistics to get a general understanding of the lesson, or they can be used to jump to specific parts of the recording. The recorded videos can be uploaded to and stored on a web-based portal named VEO portal. The portal allows users to create personal profiles, professional communities and networks. Users can review their videos, search for specific tags and invite other users to watch and comment on their videos.

The aim of the project is to investigate how teachers' reflect on their practices for

professional development by using the VEO app during their transition from teacher

training to initial teaching. The results of this project will provide detailed insight into

the reflective practices of teachers, how an innovative technological tool facilitates

these practices and how they change in time. It will also give information on how

teachers choose to use the app, interact with colleagues on the VEO portal and thus

contribute to the app's further development.

Data Collection

Audio-video recordings and photographs

You will be asked to use the VEO app to record a minimum of three of your lessons

during both your teacher training and initial teaching year. Upon reviewing these

recordings you will be invited reflect on your practice in a form you choose such as

written reflection, video diary and/or feedback meeting with peer/observer.

In addition to the videos the researcher would like to conduct interviews,

observe/audio-video record some of your lessons and feedback sessions and take

field notes in order to gain a better understanding of your use of the app for

professional development.

The data you provide will be treated as highly confidential, your identity will only be

known by the main researcher and the necessary steps for anonymization will be

taken. The data will be securely stored in the VEO app (Amazon cloud) and

Newcastle University and will be used for research purposes only.

Withdrawal

Involvement in this project is entirely voluntary and participants have the right to

withdraw at any point without providing reasons. After reading this information, if you

would like to take part, please complete the consent form.

If you have any further questions regarding your participation in this project please

do not hesitate to contact:

Saziye Savaskan

E-mail: s.savaskan2@newcastle.ac.uk

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Appendix B



I agree to be involved in this project and:

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VEO (Video Enhanced Observation) for Professional Development Project Informed Consent Form for Participants

I have read and understood the information sheet, and have had the opportunity to ask questions. I understand participating in the project is voluntary and that I have the right to withdraw at any time without providing reasons. Please tick the boxes to show your agreement in the project processes:

If you have any further questions regarding your participation in this project please do not hesitate to contact:

Saziye Savaskan	Supervisor: Professor Paul Seedhouse
-----------------	--------------------------------------

E-mail: s.savaskan2@newcastle.ac.uk E-mail:

Phone:

Appendix C

VEO Europa project Interview Questions:

RQ1.

- 1. Have you used videos for professional development in the past?
- 2. How did you use VEO?
- 3. What features of VEO system did you use? How did it go?
- 4. Did you use the education tags?
- 5. Did you customize the tags? How? Why? Did you face any challenges?
- 6. How does professional development work in your context?
- 7. How are you incorporating VEO into your professional development practices?
- 8. Do you notice any differences in your PD practices with VEO? Could you tell us about any changes?
- 9. To what extent do you think you will keep using VEO in your future practices?

RQ2.

- 1. Could you illustrate your uses of VEO? (videos, vignettes, notes)
- 2. How does ITT work in your context?
- 3. How are you incorporating VEO in ITT practices?

RQ3.

- 1. How did you use VEO with students?
- 2. In what ways did you use VEO to monitor students?
- 3. In what ways did you use VEO to assess students?
- 4. Who uses the technology?
- 5. How did it go?
- 6. Could you show us some examples?
- 7. What tags did you use? Why?

RQ4.

- 1. Could you tell us any benefits/challenges of using VEO with students?
- 2. Could you discuss any changes in students' behaviour?
- 3. Will you continue to use VEO with students?

Developments/suggestions.

1. Now that you have used VEO, what would you recommend to improve the app? Why?

Appendix D

VEO Interview Protocol – for teachers

Start with general questions about background, how much teaching they have done for their course and whether they've done teaching outside the practicum.

Geçmişle ilgili genel sorularla başla, okulda ne kadar öğretmenlik deneyimleri oldu ve staj dışında öğretmenlik yaptılar mı.

- 1. What are your thoughts on using technology in your lessons? Derslerinizde teknoloji kullanımıyla ilgili ne düşünüyorsunuz?
 - a. –for your professional development? profesyonel gelişiminiz için teknoloji kullanımı?
- 2. Have you used videos for lesson observations/professional development in the past? Daha önce ders gözlemi için ya da profesyonel gelişim için video kullandınız mı?
- 3. How did you use VEO? (what the process was like) VEO uygulamasını nasıl kullandınız? (süreç nasıldı)
 - a. How many times did you use VEO? VEO'yu kaç kere kullandınız?
 - b. Who observed your lesson? Dersinizi kim gözlemledi?
 - c. How did you get feedback from these observations? Bu gözlemlerden nasıl dönüt aldınız?
- 4. What was the focus of the observations?

Ders gözlemlerinin odağı neydi?

- a. Who chose the focus? Bu odağı kim seçti?
- b. Was it the same for all of the observations? Bütün ders gözlemleri için odak aynı mıydı?
- c. Why was that particular area chosen? Neden özellikle o odak seçildi?
- 5. Which tags did you make use of? Hangi tagleri/etiketleri kullandınız?
- 6. Did you make use of the app statistics? *Uygulamanın gösterdiği istatistiklere baktınız mı?*
- 7. Did you use the VEO portal? VEO portalini kullandiniz mi?
- 8. What was the process like after the VEO observation? VEO ile gözlem yapıldıktan sonraki süreç nasıl ilerledi?
 - a. Did you watch your own lessons? Kendi derslerinizi izlediniz mi?

- b. Was there an element of personal reflection? izlerken performansınız üzerine düşündünüz mü?
- 9. Throughout the practicum did you notice any changes in your teaching practices? (in terms of the areas focused on during the observations)

 Staj süresince öğretmenliğinizde herhangi bir değişiklik fark ettiniz mi? (özellikle gözlemler sırasında odaklanılan konularda)
 - a. Could you give a specific example of an area of improvement? Gelişim gösterdiğiniz bir alanla ilgili örnek verebilir misiniz?
 - b. Was this a personal discovery or through feedback?

 Bu noktada gelişim gerektiğini kendiniz mi fark ettiniz yoksa dönütler sayesinde mi?
- 10. How were lesson observations done prior to VEO? *VEO'dan önce ders gözlemleri nasıl yapılıyordu?*
- 11. How would you compare the effectiveness of observations done with and without VEO?
 - VEO ile ve VEO'suz yapılan ders gözlemlerinin etkililiğini nasıl kıyaslarsınız?
- 12. Did you face any challenges while using VEO? VEO kullanırken herhangi bir güçlükle karşılaştınız mı?
- 13. Were there any benefits of using VEO for observations?

 Gözlemer için VEO'yu kullanmanın herhangi bir artısı oldu mu?
- 14. Would you say using VEO during the practicum contributed to your professional development?
 - Sizce staj sırasında VEO'yu kullanmanın profesyonel gelişiminize katkısı oldu mu?
- 15. How do you think VEO can be incorporated in your future professional development?
 - VEO'yu gelecekte profesyonel gelişiminiz için kullanmayı düşünür müsünüz? Nasıl?

VEO Interview Questions – for supervisors/teacher trainers

- 1. Have you used video for observations or professional development in the past? Daha önce ders gözlemi ya da profesyonel gelişim için video kullandınız mı?
- 2. How did you use VEO? (what was the process like?) VEO uygulamasını nasıl kullandınız? (süreç nasıldı?)
- 3. What was the focus of the observations? Sinif gözlemlerinin odağı neydi?
 - a. Who chose the focus?

 Bu odağı kim seçti?
 - b. Why was it chosen? Neden seçildi?
- 4. Which tagset did you use?

Hangi tagseti/etiket sistemini kullandınız?

- a. Did you focus on a specific part of the tagset? Belli bir tage/etikete odaklandınız mı?
- 5. Did you make use of the app statistics? *Uygulamanın gösterdiği istatistiklere baktınız mı?*
- 6. Did you use the VEO portal? VEO portalini kullandiniz mi?
- 7. What was the process like after the VEO observation? VEO ile gözlem yapıldıktan sonraki süreç nasıl ilerledi?
- 8. How were lesson observations done prior to VEO? VEO'dan önce ders gözlemleri nasıl yapılıyordu?
- 9. How would you compare the effectiveness of observations done with and without VEO?
 - VEO ile ve VEO'suz yapılan ders gözlemlerinin etkililiğini nasıl kıyaslarsınız?
- 10. Did you face any challenges while using VEO? VEO kullanırken herhangi bir güçlükle karşılaştınız mı?
- 11. Were there any benefits of using VEO for observations?

 Gözlemler için VEO'yu kullanmanın herhangi bir artısı oldu mu?
- 12. If you were to use VEO in a similar setting, is there anything you would change to improve the process?
 - Benzer bir ortamda VEO'yu kullanacak olsanız, süreci iyileştirmek adına yapacağınız herhangi bir değişiklik var mı?
- 13. Would you consider using VEO in the future? With your students or for your own professional development?
 - VEO'yu gelecekte kullanmayı düşünür müsünüz? Öğrencilerle ya da kendi profesyonel gelişiminiz için

Appendix E

Guidelines for Critical Self-Reflection

- 1. Watch your video from the beginning to the end first, take notes based on your observation.
- 2. Go through the moments tagged in your lesson video.
- 3. Try to find the positive aspects and problematic aspects of your class.

Write a reflection

- a. Briefly summarize your aim and classroom procedures that you planned for the lesson. Did your class go as planned? What are the differences between what you planned and what actually happened in the lesson?
- b. Briefly describe a short segment in your lesson, which you found to be successful and engaging for your students. Refer to specific minutes and seconds where relevant.
- c. Briefly describe a short segment in your class, which you found to be problematic and less engaging for your students. Refer to specific minutes and seconds where relevant.
- d. Reflect on your and the students' use of L1 (i.e. Turkish), the questions you asked to the students, and the feedback turns. How did you manage student mistakes and correct answers? Think about what you did right after a student says something. What do you think about your own performance.
- e. How did you manage troubles of communication? For example, long silences after you ask a question, or when a student shows that she does not know the answer, or displays unwillingness to participate.
- f. What would you change in your next class?