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Research Article

Exploring pre-service EFL teachers' reflections on viewing guided and unguided videos of expert teachers online

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ABSTRACT

This study seeks to explore perspectives of EFL teachers with regard to the experience of viewing experts' videos with and without guidance in an online platform and how this experience is mirrored in their reflective practice. Twelve pre-service EFL teachers watched the videos of eight expert teachers teaching in real ESL/EFL classes in different contexts over the world. The participants wrote reflective journals, responded to questions embedded in the videos and a post-treatment questionnaire. Qualitative data in the study were analyzed using content analysis. The results indicated facilitative effects of viewing videos of experts on pre-service teachers' reflections. Guided videos in particular yielded more and deeper levels of reflection, and were perceived more positively by the participants.

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Statement of Publication Ethics

The researchers observed ethical principles such as confidentiality, informed consent, anonymity and received ethical approval from Social Sciences and Humanities Scientific Research and Publication Ethics Committee of Sivas Cumhuriyet University dated 02.04.2021 and numbered E-60263016-050.06.04-29050.

Authors' Contribution Rate

Although the authors equally contributed to data collection, data analysis and writing up the article, the first author focused on the literature and discussion while the second author focused on data analysis and writing up the methods section.

Conflict of Interest

There is no conflict of interest.

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Introduction

Introduced into teacher education via the publication of The Reflective Practitioner (Schön, 1983), reflective practice in teacher education has been considered as an important element (e.g., Bryan & Recesso, 2006; Hiebert et al., 2002; Orlova, 2009; Rich & Hannafin, 2009; Tripp & Rich, 2012). Research on reflective practice in teacher education largely draws on Dewey (1933) and Schön (1983), who emphasize experiential learning via integration of experience with reflection. Participating in reflection is generally regarded as a fundamental norm for teacher education (TE) (McCullagh, 2012). Eröz-Tuğa (2013) notes that reflective practice "has been suggested and adopted for effective language teacher training" (p. 175). Akcan (2010) suggests that reflective practice "should be encouraged" in the early years of teacher education programs, because pre-service teachers and in-service teachers develop their "teaching practices" through reflection. Today, many teacher training programs such as The National Council for Accreditation of Teacher Education (USA), the Department for International Development (UK) (Tripp & Rich, 2012), and the Teacher Registration Board (Australia) incorporate reflective practice as an integral part of their education, and foreign language teacher education is not an exception to this. In the same vein, Orlova (2009) underscores that foreign language teacher education relies heavily on reflection, which effectively hones the abilities of English teacher candidates by making them conscious of not just how they execute the strategies they learn in lesson but also of why they make basic choices about approximately all perspectives of their teaching practice.

A variety of reflection methods have been developed by practinoners including "Journal writing, classroom observations, group discussions, or video recording of a teaching performance" (Akcan, 2010, p. 35). Rich and Hannafin (2009) point out that "video technologies may afford largely untapped potential to support and document the processes and impact of reflective practices" (p. 53). Video is increasingly used in TE and teacher professional development (TPD). Recent reviews of video use both for TPD (Major & Watson, 2018) and for pre-service TE and TPD (Gaudin & Chaliès, 2015) suggest that video has a potential to be an effective tool for reflection and analysis and thus improvement in practice. In line with the findings of these reviews, viewing videos of instructional practice appears to be one of the most widely adopted and effective means to foster reflection in TE and TPD (e.g., Beauchamp, 2015; Fadde & Sullivan, 2013; Gaudin & Chaliès, 2015; Hockly, 2018; Kang & van Es, 2019; Lok et al., 2018; Major & Watson, 2018; Sherin, 2004; Woolman, 1969; Zhang et al., 2011).

In spite of extensive research suggesting the effectiveness of using digital video, there is a gap in research into the affordances of emerging technologies such as interactive videos for the reflective practice in teacher education. In this vein, Susoy (2015) points out the need for further research into using digital video for reflection in TE and TPD. This case study sets out to discover how prospective EFL teachers interpret the experience of watching experienced teachers' in-class videos in an online video platform. In view of the fact that interactive videos is an under-explored case of using video in teacher education, the study also aims to explore how guided questions embedded in videos transformed reflective practice experiences of pre-service EFL teachers.

Literature Review

Video-Based Reflection in Teacher Education and Professional Development

Shortly after videos have become handier and more affordable in the 1960s, their potential for teacher education was better recognized and integrated in TE (Rich & Hannafin, 2009; Sherin, 2004). As videos get more affordable (Calandra & Rich, 2014) and feature enhanced capabilities (Bakla, 2017), their potential to add new perspectives in teachers' professional learning (Baran, 2014) have been better realized. The effectiveness of videos as a tool to enhance critical reflection and self-assessment has been studied extensively (e.g., Blomberg et al., 2013; Calandra et al., 2014; Darling-Hammond, 2006; Harford & MacRuairc, 2008; Harford et al., 2010). Research indicates that there are three main reasons why videos are widely used in teacher education. First of all, they provide more access to classes without spoiling their authenticity as compared to traditional observation, and foster the link between theory and practice. Second, they are increasingly featuring enhanced viewing qualities and higher storage capacities, which makes them more conducive to analysis of professional practice. Finally, on a macro level, they are the facilitators of institutional reform in education. The researchers also note that the most significant contributions of videos are increased motivation, better selective attention and knowledge-based reasoning and in turn better implementation in classroom (Gaudin & Chaliès, 2015). With these facilitative effects, videos can increase depth of reflection.

Reflecting on classroom events is regarded as teachers' ability to contemplate productively about teaching (Davis, 2006) and it can be a predictor of the quality of instructional process (Kersting et al., 2010; van Es & Sherin, 2002). Videos are better than in-class observation in that practitioners have the chance to watch the videotaped lesson multiple times, without any limitation, to review the lesson and see the points which they have missed in-class observation (Akcan, 2010; Kleinknecht & Schneider, 2013). When compared to journal writing, videos provide more vivid "examples" of teaching processes than journal writing (Hiebert et al., 2002) because they enable teachers to have a more genuine and richer representation of the instructional setting as they capture voices, body language and communication (Koc et al., 2009, p. 1159). Videos are referred as "a powerful tool" in teacher education as it enables practitioners to examine the intricacies of the observed lesson in depth, to link "knowledge and practice" (Perry & Talley, 2001, p. 26). Moreover, videos can help teachers apprehend diversity and complicatedness of classroom practices (Gaudin & Chaliès, 2012), provide an "outside" and a more versatile perspective with verbal and non-verbal clues students give during instruction (Coffey, 2014). Yet another positive aspect of video-based reflection is that it encourages the practitioner to evaluate the recorded lesson and detect the strengths and weaknesses of the lesson (Kleinknecht & Schneider, 2013; Orlova, 2009; Sherin & van Es, 2009). Baecher et al. (2014) propose that thanks to videos, teachers can examine themselves teaching and reflect more on their teaching and thus cooperate with their supervisors more in reflection sessions. Likewise, Yücel et al. (2016) also showed the effectiveness of video-coaching in EFL teachers' professional development. Videos have affective advantages in that some teachers, who have the fear of being observed and refrain from it, can self-observe

themselves using their own footage, which can reverse such kind of affective considerations with regard to observation (Baecher & Connor, 2016). Furthermore, videos of professional teachers modelling the use of certain methods can support pre-service teachers to procure a well-founded knowledge of theory (Darling-Hammond & Bransford, 2007) and teachers have the opportunity to observe a wide range of diverse learning contexts that would otherwise be impossible to have access to (Bayram, 2012). Kang and van Es (2019, p. 2) contend that as videos can capture specificity of professional practice, they enable teachers to see classroom practice in detail as they reveal, which is not so easy to capture in real classes.

Theoretical Foundations and Models of Video Viewing in Teacher Education

Although videos, especially with recent technological improvements, hold a plethora of potentials for TE and TPD, it is the theoretical background and pedagogical frameworks that can guide effective use of videos in TE and TPD. Gaudin and Chaliès (2015) state that the objectives of video viewing in teacher education mostly rely on similar theoretical grounds as teacher education and professional development programs such as Schön's reflective practitioner (1983), inquiry theory of Dewey (1933), social constructivism of Vygotsky (1978). Videos, which are not effective in themselves but should be incorporated in a teaching program (Blomberg et al., 2013; Kang & van Es, 2019), are generally employed in teacher education with two different objective perspectives: normative and developmentalist (Gaudin & Chaliès, 2015). The former refers to cases when teachers (in-service or pre-service) are asked to view videos to improve their ability to interpret and reflect on classroom activities, while the developmentalist objective refers to viewing of videos by teachers with an aim to develop their understanding of what to do in class based on good examples of classroom practices in videos. To meet diverse learning goals and skills required in teacher education, Masats and Dooly (2011) propose a holistic approach encompassing both normative and developmentalist elements. This approach, which regards teacher trainees both as a teacher and a learner, aims at development of instructional knowledge, digital competencies and media literacy.

Based on various theoretical foundations and research findings, scholars have developed different models or framework that can serve as a guide to employ, theorize and research videos in TE and TPD (e.g., Gaudin & Chaliès, 2015; Kang & van Es, 2019). Emphasizing not only the cognitive and psychomotor aspects, but also emotional and social aspects of the profession, Yung et al. (2010) devised a model for effective use of videos in teacher education programs and identified three objectives for such programs: critical reflection, meaningful comparison and productive discussion. Santagata (2014a, 2014b) also proposed a model composed of four elements for the use of video viewing in teacher education: "(a) What is the teacher learning purpose of using video? (b) What types of video will work for that purpose? (c) What viewing modality will best serve that purpose? (d) How can we assess that we have achieved our purpose?" (Santagata, 2014b, p. 196). The Lesson Analysis Framework (Santagata & Guarino, 2011) is comprised of a set of questions that guide teachers in their lesson analysis process: analyze the learning goals, analyze student thinking and learning, construct hypothesis about the effects of instruction on students' learning and finally use analysis to make proposals for improvement. Drawing on previous models, Gaudin and

Chaliès (2015) conceptualized video viewing in teacher education under four aspects, characterized by four questions: "(a) What is the nature of teachers' activity as they view classroom videos? (b) What are the objectives of video viewing in teacher education and professional development? (c) What type of video is viewed in teacher education and professional development? (d) What are the effects of video viewing on teacher education and professional development?" (p. 44). The Learning to Notice framework, developed by van Es and Sherin (2002), is based on the construct of noticing and aims to shape what teachers pay attention to and how they analyze classroom interactions. More recently, Kang and van Es (2019) proposed an integrated framework, the principled use of video (PUV). Based on situative and sociocultural theories, the developers suggest: (1) setting goals (overall pre-service teacher education and video-specific objectives), (2) setting up and coordinating interactions (select a clip, design a task, select a tool and facilitate conversation).

Such frameworks are of great pedagogical value for embedding video in teacher education. They can foster structuring of video tasks and coordinate conversations to safeguard that valuable ideas and manifold perspectives are submitted to analysis, and that evidence-based conversation takes place (Kang & van Es, 2019). Interactive video platforms with their versatile features can have a variety of affordances for better realization of these pedagogical frameworks.

Constraints in Video Viewing

In spite of their pedagogical value, prevalence and persistence as a method in TE and TPD (Sherin, 2004), videos come with some drawbacks regardless of the type of the video viewed (Brouwer, 2015; Kleinknecht & Schneider, 2013; Sherin, 2004; Zhang et al., 2011). Based on supervisors' views, Baecher et al. (2014) list three drawbacks of using videos. First, videos limit in-class observation of the supervisor, to which Sherin and van Es (2009) refer to as the keyhole effect, the tendency of teachers to focus on important incidences while missing other important events that can be of the same level of importance. Baecher et al. (2014) also note that teachers might tend to deliberately cut the video to present a better image of themselves. Second, novice teachers seem to be detached from their classroom practice shown in the video, and instructors had difficulty in facilitating reflection by using video. Third, supervisors had difficulty finding ways to foster reflection using videos. Likewise, Zhang et al. (2011) point out that one of the challenges using videos in teacher education is to find a way to promote discussion and productive examination. Moreover, in essence video viewing is a passive activity in that viewers have no opportunity to interact with the participants and videos lack contextual information that can be beneficial in interpreting behaviors and comments of the participants in the video (Sherin, 2004).

Interactive Videos: Overcoming Constraints of Videos in Teacher Education

Considering the frameworks discussed above and the challenges of using videos in TE and TPD, interactive videos with their innovative features can be employed to better realize theoretical frameworks and overcome some of the challenges of using video in TE and TPD. Video-discs, which can be regarded as earlier version of interactive videos, were first

introduced in TE as early as the 1990s (Cronin & Cronin, 1992; McIntyre & Pape, 1993). Video annotation tools have been adopted from qualitative research (Fadde & Sullivan, 2013) into teacher education with the educational objective of 'engendering more profound self-reflection' (e.g., Calandra et al., 2009; Rich & Hannafin, 2009; van Es & Sherin, 2002). Schworm and Renkl (2007) revealed that providing pre-service teachers with instructional aids, e.g. prompts can reduce their cognitive loads when viewing videos. As Agarwala et al. (2012) cite, a number of studies (e.g. Rich & Hannafin, 2009) list several benefits of web-based video technology: being free from time and location constraints, having creative learning design opportunity, extending learning on related topics, entailing attractive and inspiring learning approaches, self-reflection and incorporation of evaluation. Hockly (2018) also notes that developments in technology have enabled teachers to annotate and share footage of their practices and provide feedback and comments online.

To help novice or pre-service teachers compensate for their weak reflection skills (Blomberg et al., 2013), using an online interactive video platform, which enables adding a variety of questions, texts etc. (Bakla, 2017), can foster reflection. For example, questions or comments added to certain points in interactive videos can help novice teacher decide what to focus on and structure their reflection more coherently. Furthermore, compared to peer-reflection on in-class observation or traditional peer video viewing, interactive videos have several affordances. First of all, it can help teachers overcome some of the affective issues in peer-feedback. By their nature, videos offer a distance to comment on, which face-to-face peer-reflection or group discussions does not offer, and this distance might make their users feel at ease. Even shy participants can contribute to discussion as the medium is written and remote. It can help pre-service teachers to feel less anxious as they are not directly vulnerable to comments of their peers in class. As Kang and van Es (2019) note with recent technological advancements, pre-service teachers' videos can be carried out of locality of the classroom into a collective learning space, which can increase interaction with others on professional practice. Moreover, interactive videos do not only save classroom time by carrying feedback and reflection outside the class, but also give more chances and time to pre-service teachers to ponder and make relevant written and time-stamped comments at specific points without having to describe the specific moment. Moreover, feedback or comments on interactive video platforms can be more easily processed, traced and recorded compared to verbal comments on live or videotaped professional practice.

As already noted, some participants might find their peers' videos not to be conducive to discussion (Zhang et al., 2011) and supervisors were not sure how to use the video to facilitate teacher reflection (Baecher et al., 2014). Thanks to time-stamped comments, supervisors and also peers can add guiding questions to facilitate peer feedback and reflection and to help them decide what to focus on in their own or others' footages. Furthermore, traditional videos might lack valuable contextual information (Sherin, 2004), which makes video viewing more meaningful especially in the case of watching an unknown teacher. However, thanks to interactive videos such information can be integrated at the beginning or relevant points in written format and even small tests can be added for formative assessment during video viewing. Another challenge raised was that teachers feel psychologically isolated from their

own teaching in the video and feel detached from their "selves" and their performance in the video (Baecher et al., 2014). This affective problem can be dealt with by on the spot, asynchronous and remote interactional comments, which can increase the likelihood that pre-service teachers embrace their professional performance in the video. Finally, interactive videos can transform video viewing as a passive activity into a more cognitive-driven process by facilitating selective attention and knowledge-based reasoning (van Es & Sherin, 2008) thanks to questions, texts, and images added at specific points in video.

Baecher and Kung (2011) used online three-hour course for novice TESOL teachers with an aim to develop their skills of observation and analysis of classroom practice. Asking students to view the same footage with different lenses, they found that online medium for instruction can be conducive for TE. Tools such as IRIS Connect (https://www.irisconnect.com), and Video Enhanced Observation (VEO, http://www.veo-group.com/), which have been particularly designed to facilitate teacher development, enable teachers to share and record videos collaboratively (Hockly, 2018). Studies using these recently developed tools indicate that they improved teachers' understanding and classroom practice (Davies et al., 2017) and enabled teachers to focus on segments of practices tagged by their peers swifter and more efficiently. Gibbons and Farley (2021) also pointed out affordances of using videos in teacher education. The researchers reported that using video for reflection enhanced pre-service teachers' pedagogical practices, classroom management, and learner engagement techniques. Another study indicated that such tools also made peer observation quicker, easier and more to the point and saved time allocated for post-observation discussions (Batlle & Miller, 2017). Hockly (2018) points out that these platforms have enabled online communities of practitioners to observe, give feedback and commentary in a digitally safe and distant environment. Likewise, the VELTE (Video resources for English Language Teacher Education) and the ViLTE (Video in Language Teacher Education) projects are innovative examples of how videos can be used in language teacher education. Using a more recent 360 degree video technology, Buchbinder et al. (2021) found that videos can increase self-reflection and professional development of pre-service secondary school mathematics teachers. Videos can be used in a variety of ways to enhance reflection among teachers across borders and cultures. Loranc-Paszylk et al. (2021) found that video-recorded interactions between two groups of pre-service English language teachers in the US and Poland increased their reflection on teaching. As previous research indicates when used in line with a pedagogical sound theoretical framework, web-based interactive video platforms hold the potential to have a transformative effect and help teacher trainers to overcome aforementioned challenges in the effective incorporation of video viewing in TE and TPD.

The current study aims to reveal how prospective English language teachers perceive the experience of viewing videos of expert teachers in an online video platform. Since interactive video technology is not adequately addressed in reflective practice in TE and TPD, this study also aims to discover how guided and unguided viewing of expert videos is echoed in the reflective practices of prospective EFL teachers in an online practicum course. To this end, the current study aims to answer the following research questions:

1. What are the pre-service EFL teachers' perceptions of viewing expert videos in an online practicum?

2. How is the experience of viewing guided and unguided interactive videos mirrored in the reflection processes of EFL pre-service teachers?

Method

Research Context and Participants

12 pre-service teachers from an English language teaching program at a mid-Anatolian university participated in this study. There were 7 females and 5 males, whose ages varied between 21 and 23. All participants were seniors enrolled in two different sections of Practicum course. At the beginning of the term, participants were informed about the research purpose and design, and they voluntarily participated in the study.

Research Design

This case study sets out to explore how pre-service English language teachers value viewing experts' videos and how guided and unguided viewing of expert teachers' videos shape their reflection. Although the researchers designed the study to include guided vs. unguided videos, they did not start with a predetermined set of research questions in mind but wanted to explore possible affordances this underexplored technological advancement (i.e. interactive videos) can hold for pre-service teachers' reflection processes. Thus, in line with the emergent nature of qualitative research, the researchers collected data sets and tried to categorize and organize them with a set of models, theories or frameworks of video viewing and reflective practice in teacher education. The coding was an iterative process, that is, the researchers shifted between the data codes and the literature with an aim to connect the codes with existing theoretical frameworks and realized that guided videos led to different topics of reflection at deeper levels according to Van Manen's (1977) model. Although the results of analyses of data from reflective journals and responds to the questionnaire are presented separately, their results are combined in the interpretation and discussion of findings based on limited relevant research.

Procedure

The course, practicum, traditionally includes two parts; that is, supervised field experiences at schools and on-campus seminars. The pre-service teachers are assigned to schools where they observe lessons and practice teaching in real classrooms. Weekly on-campus seminars, on the other hand, give them opportunities to discuss several theoretical and instructional issues and share their views and thoughts.

However, due to Covid-19 pandemic regulations in 2021, the schools and universities in Turkey were shut down and face-to-face education was suspended. The whole education at all levels from elementary to tertiary level was continued online. Accordingly, the participants took the practicum course online in the Spring term of 2020-2021 academic year. They were assigned to public schools at the beginning of the term and required to observe classes and practice teaching held on Zoom for 6 hours a week throughout the term. As for the theoretical seminars, they met once a week via Microsoft Teams and the class session lasted two concurrent

lessons, about 50 minutes in total. Since they took this course online, they did not have opportunities to observe and practice teaching in real classrooms. This is the main motive of incorporating videos that display different classroom contexts in the online practicum course.

At the beginning of the term, the researchers as the instructors of the two sections had an initial meeting and decided on the procedures. EdPuzzle was chosen as the interactive video platform. The researchers created a shared teacher account on EdPuzzle. One week before the treatment, the researchers gave pre-service teachers an online tutorial on the interactive video platform. The videos were uploaded on EdPuzzle and the participants were sent a link to the assigned video each week. The study had a ten-week time span. During the first four weeks of the study, the participants viewed four unguided videos and then they were asked to watch four guided videos. They were supposed to watch a video each week, respond to the reflection form about the video content and then share their reflections on a shared Google drive folder. They also had an opportunity to discuss their reflections on their regular class sessions held on Microsoft Teams. At the end of the study, an open-ended questionnaire was sent as a Google form to the participants.

Data Collection Tools and Processes

EdPuzzle

EdPuzzle (https://edpuzzle.com/), the interactive video platform, was used in the study. It is a free online tool that allows users to edit and add content to videos. Users can either upload their own videos or use a video from online sources. EdPuzzle enables users to crop the video, record an audio track, and add audio notes and questions.

The researchers created a teacher account which made it possible to edit videos and share it with the participants. The pre-service teachers were sent the class code and a link to enter when logged in to their EdPuzzle account. As for the guided videos, the researchers added open-ended questions that required participants to answer while watching the videos. They set options to prevent participants from skipping content in the videos and set a deadline for each assignment. The reports showing whether the pre-service teachers watched the videos and their responses to the questions of the guided videos were downloaded from EdPuzzle application as an Excel file.

Videos

The videos used in the study were selected from the video material of Harmer's (2015) book entitled *The Practice of English Language Teaching*, 5th edition. The videos display clips from real classrooms accompanied with interviews with teachers on their classroom techniques. The videos were uploaded on EdPuzzle and the participants were sent a link to the assigned video each week.

Eight videos were utilized in the present study. The first four videos were unguided

meaning that the participants were not given any questions or prompts while they were watching the videos. The pre-service teachers watched the videos and then answered the questions given in the reflective task. However, the latter four videos were guided since there were embedded in-video questions that helped them direct their attention to specific issues and incidences related to the video they were watching. Guided videos can be considered interactive since they established interaction between the participants and the videos. In the case of guided videos, the participants responded to the questions in the video and the questions in the reflective task. In the unguided videos, there were no questions embedded, the participants responded the reflective task only. In other words, all of the participants answered the same set of questions in the reflective tasks for all videos regardless of their type.

Table 1. Information about the Videos Displayed in EdPuzzle

Video	*Context*	*Guided or Unguided*	*Duration (minutes)*
First video	A prep class at a state university in Turkey	Unguided	02.58
Second video	A private language school in Mexico	Unguided	20.49
Third video	A private primary school in Turkey	Unguided	16.10
Fourth video	International House London	Unguided	30.17
Fifth video	A prep class at a Turkish state university	Guided	06.53
Sixth video	A private language school in Mexico	Guided	25.41
Seventh video	A private primary school in Turkey	Guided	20.51
Eighth video	International House London	Guided	16.30

Participants' reflections

The participants watched videos on EdPuzzle for eight weeks and after watching each video, they were asked to respond to four open-ended questions that encouraged them to reflect on the lesson that they had watched on EdPuzzle. The reflective task includes questions which invite the participants to reflect on the most and the least effective part of the lesson by justifying their responses, whether the materials, techniques, tasks and texts were engaging and how they would change any part of the lesson if they were to teach that lesson. They uploaded their reflections into a shared Google drive before the class each week and they discussed the video content in the weekly class sessions held on Microsoft Teams.

Open-ended questionnaire

At the end of the study, an open-ended questionnaire was sent to the participants via Google form in order to investigate their reactions to the use of interactive videos on EdPuzzle platform, its effect on their learning and reflective thinking and their ideas about the use of such videos in teacher education programs. Below are the four open-ended questions presented to the pre-service teachers via Google Forms:

1) How do you think guided videos affected your reflection process?
2) How do you think guided and unguided videos were different in terms of usefulness, guidance and awareness about instructional process in the videos?
3) How did watching videos influence your development as a pre-service English teacher?

4) What type of videos (guided vs. unguided) do you think should be used in teacher education?

Data Analysis

Qualitative content analysis was used in this study to analyze the data that included weekly reflective reports and responses to open-ended written questionnaires. In line with the research questions, content analysis was carried out using two different approaches, namely, inductive and deductive processes, both of which involved three main phases: preparation, organization, and reporting of results (Elo & Kyngäs, 2008, p. 110). In the preparation phase, the researchers read the data several times, made sense of the whole and selected the units of analysis. Even though these two processes have similar preparation phases, the processes involved in the organization phase differ. Codes emerged in inductive content analysis process were checked against existing frameworks in the literature to be used in the deductive process and Van Manen's model was deemed to be appropriate. Deductive content analysis was conducted in this study to analyze the focus of written reflections, meaning that coding started with a predefined set of codes. Participants' written reflections were assigned to three codes based on the Van Manen's three levels of reflection (Van Manen, 1977): technical perspective, practical perspective or critical perspective. While deductive analysis led to answers for the second research question, inductive content analysis yielded responds to the first research question. The organization phase in the inductive content analysis started with generating initial codes in the open coding stage, and then continued with the creation of categories by assigning these codes into subgroups, and formulating a general description of the research topic through abstraction (Elo & Kyngäs, 2008).

Data were coded by two researchers separately. They discussed and reviewed any codes which were not agreed upon and obtained consensus. In their analyses, the coders reached a consensus of 92%, an acceptable percentage of agreement for the interrater reliability in the literature (Miles & Huberman, 1994; Patton, 2002).

Ethics

Prior to the study, the researchers obtained ethical approval from the Ethics Committee of the institution in which this study was conducted. There are a number of ethical principles including informed consent, anonymity and confidentiality taken into consideration while administering this research study. Informed consent was obtained from the participants since they were informed about the research purpose, research design and procedures and they voluntarily took part in the study. Furthermore, in order to protect the anonymity and confidentiality of the participants, participants were informed that all data would be kept confidential or anonymous in all stages including the processes of data collection, analysis and publication. Each participant was given a pseudonym which included the abbreviation of 'pre-service teacher' and a number (e.g, PST-1, PST-2, PST-3) and no identifiers such as names or geographical cues were displayed in the study. Additionally, the EdPuzzle class code was only

shared with the participants so that no other persons could log into the system.

Results

Pre-Service Teachers' Reflections

Results regarding pre-service teachers' written reflections are presented under two in two dimensions: the focus of reflection and topics of reflection.

The focus of reflection

As for the focus of the reflection, the responses given to each question of the reflective task for eight videos were coded by using three categories based on the Van Manen levels of reflection (Van Manen, 1977): technical perspective, practical perspective or critical perspective. The reflective focus categories were defined following from Halter's study (2006) that employed video analysis as a tool of self-reflection with pre-service teachers.

The first category of reflective focus, technical perspective, referred to the context-free generalizations. Participants engaged in this type of reflection did not support their reflections with specific examples from the lesson they watched, but displayed general statements that might be applied to any teaching-learning situation. Practical perspective in reflections, on the other hand, involved context-specific reflections about teaching and learning. The pre-service teachers might reflect on several issues related to that teaching and learning context in the video and provide specific examples as support. The third category of reflection, critical perspective, included statements that were not only based on the specific events in the lesson but also went beyond that context and reflect on the issues that might be applied to other contexts by exploring the social, cultural and political issues of teaching. The reflective posts regarding each question of the reflective task were coded for the focus of reflection. *Table 2* shows the percentage of reflective writing foci in the reflective writing posts gathered in the study.

Table 2. Reflective Writing Focus Percentages Used in the Reflective Writings

	Percentages for Unguided Videos	*Percentages for Guided Videos*	*Percentages in Total*
Technical	43	25	34
Practical	53	65	59
Critical	4	10	7

Data analysis showed that participants' reflective focus contained more practical reflections, approximately 59% of the overall reflections, 34% technical perspective reflections and 7% critical reflections. When the distribution of the reflective focus percentages was analyzed separately for the guided and unguided videos, a similar pattern was found meaning that practical perspective was found to be the category that was most frequently exhibited in the writings. Reflective writing for unguided videos contained 43% technical perspective, 53% practical perspective and 4% critical reflection, while reflective writing for guided videos

included 25% technical perspective, 65% practical perspective and 10% critical perspective reflection. Data analysis showed that the participants were engaged in more practical and critical reflection when they reflected on the guided videos.

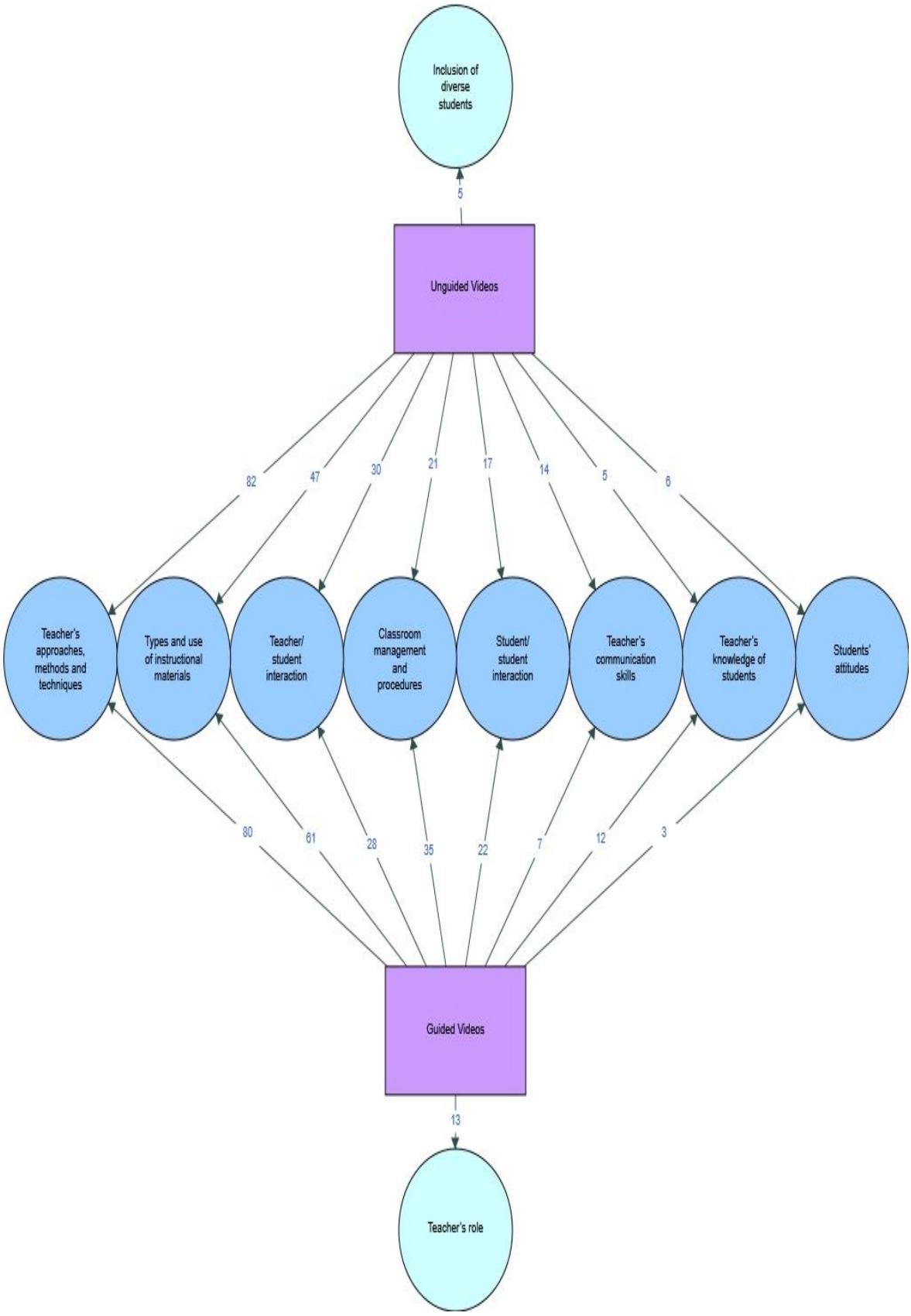
Topics of reflection

The content of the reflections was analyzed to explore what the pre-service teachers noticed in the videos. Table 3 shows the frequency of reflection topics. The findings revealed that the participants discussed various topics in their reflections. The emerging categories were *teacher's approaches, methods and techniques, types and use of instructional materials, teacher/student interaction, classroom management and procedures, student/student interaction, teacher communication skills, teacher's knowledge of students, teacher's role, students' attitude* and *inclusion of diverse students.*

Table 3. The Frequency of Reflection Topics for Guided and Unguided Videos

Reflection Topics	*Guided Videos*	*Unguided videos*	*Total*	*%*
Teacher's approaches, methods and techniques	80 (49.4%)	82 (50.6%)	162	33.2
Types and use of instructional materials	61 (56.5%)	47 (43.5%)	108	22.1
Teacher/student interaction	28 (48.3%)	30 (51.7%)	58	11.9
Classroom management and procedures	35 (62.5%)	21 (37.5%)	56	11.5
Student/student interaction	22 (56.4%)	17 (43.6%)	39	8.0
Teacher's communication skills (e.g. voice, gestures, tone, body language, speech)	7 (33.3%)	4 (66.7%)	21	4.3
Teacher's knowledge of students	12 (70.6%)	5 (29.4%)	17	3.5
Teacher's role	13 (100%)	0 (0%)	13	2.7
Students' attitudes	3 (33.3%)	6 (66.7%)	9	1.8
Inclusion of diverse students	0 (0%)	5 (100%)	5	1.0
Total	261 (53.5%)	227 (46.5%)	488	100

Figure 1. A concept map of reflection topics for guided and unguided videos



The most frequently discussed topics belong to the categories of *teacher's approaches, methods and techniques* (33.2%) and *types and use of instructional materials* (22.1%), which were followed by the categories of *teacher/student interaction* (11.9%), *classroom management and procedures* (11.5%) and *student/student interaction* (8%). The categories with fewer frequencies were *teacher's communication skills* (4.3%), *teacher's knowledge of students* (3.5%), *teacher's role* (2.7%), *students' attitudes* (1.8%), and *inclusion of diverse students* (1%).

When the topics of reflection were analyzed for the reflections provided for guided and unguided videos separately, it was found that pre-service teachers paid more attention to the guided video segments (53.5%) compared to the topics of reflection for unguided videos (46.5%). Furthermore, the major reflection points were found to remain similar in both types of video integration. While the first two categories, *teacher's approaches, methods and techniques*, and *the types and use of instructional materials* were the most frequently mentioned topics in both types of the videos, there is a change in the focus of reflection for the other categories mentioned above (see Table 2). Furthermore, we have a distinct category for each type of video; that is, while pre-service teachers paid attention to *the inclusion of diverse students* in unguided videos, they reflected on *teacher's role* in guided videos (see Figure 1).

The findings of open-ended questionnaire are discussed in the following section, which are organized by two dimensions: benefits of using video in practicum and comparing the two forms of videos (i.e., guided versus unguided).

Perceptions with Regard to Viewing Expert Teachers' Videos Online

Participant questionnaire data suggest that pre-service teachers overall had a positive experience with the use of videos in practicum. All the participants acknowledged the benefits of viewing expert teachers' videos on their reflection process and their development as a pre-service English teacher. The majority of the participants highlighted the fact that reflecting on the video excerpts were highly informative and instructional, and they learned new ways of teaching and several teaching activities and ideas. For example, two pre-service teacher stated:

"I have increased my knowledge about which methods and techniques I should use in classes with students in different development and intelligence areas" (PST-4).

"Videos affected me positively because I learned several methods and how these methods might be applied in the real classrooms" (PST-9).

Another benefit of video viewing on their reflection process is about their observation skills. Four participants pointed out that videos broadened their viewpoints about what they should pay attention to in terms of effective teaching practices. In the quotations given below, two pre-service teachers highlighted the effects of videos on increasing reflection and critical thinking about one's own beliefs and ideas by stating:

"Thanks to interactive videos, I am able to evaluate my own development process" (PST-11).

"In some videos, learners and techniques that the teacher used are more compatible

with my teaching method. These videos affected my reflection process positively. I learned some new techniques and strategies in order to make my teaching style more effective and beneficial" (PST-12).

In the open-ended questionnaire, 7 out of 12 pre-service teachers reported that this experience provided them with the opportunity to observe other teachers' practice in real classroom contexts. As one of the participants in the following quotation stated, different teaching learning contexts displayed through videos led them to go beyond the geographical boundaries and visit different classrooms:

"I had the chance to see how classes in different physical and cultural environments differed from each other. So, I broadened my viewpoint about classroom observation" (PST-3).

Observing other teachers' practice in real classroom settings is of great significance considering the constraints that Covid-19 pandemic has brought into the education. Due to the Covid-19 pandemic, the pre-service teachers had to attend and observe online lessons held on Zoom and students did not have to turn their cameras on in those sessions. Almost all the lessons were conducted only through lecture-type presentations. Thus, they did not have opportunities to practice in real classrooms, and classroom management was one of the components of teaching that they did not have experienced. The following quotations from the open-ended questionnaire show the participants' appreciation of having this chance to compensate for the lack of practice in terms of classroom management in online practicum:

"Due to the pandemic, we continued distance education, but we got an idea by watching the experiences of the teachers in the real classroom environment" (PST-9).

"Seeing how different teachers manage classrooms certainly did contribute to our development" (PST-11).

"I learnt new things and I experienced classroom management on screen" (PST-1).

"I liked them so much. Because of Covid-19 pandemic, we did not go to school so they were useful for us" (PST-4).

Data analysis indicated that watching videos through EdPuzzle in an online practicum not only helped pre-service teachers to develop their pedagogical knowledge, but also helped them to improve their proficiency and communication skills. One participant commented that:

"Watching videos were always a part of language acquisition for me. You directly expose yourself to the target language, see countless models repetitively, and hence you start to create a model of the target language in your brain. It is a great way for improving receptive skills. If it is an interactive and guided video, you can increase your productive skills as well" (PST-2).

Participants Perceptions of the Role of Guided vs. Unguided Videos in Reflection

All of the participants appreciated the benefits of using videos in practicum, however, when they were asked to compare guided and unguided videos in terms of usefulness, guidance and awareness about instructional process in the videos, 10 out of 12 pre-service teachers

expressed a preference toward the guided videos as opposed to the unguided video integration. Majority of the participants highlighted the fact that guided videos were better in terms of usefulness and guidance and helped them focus more on the details of the video segments and keep them on task, as shown by the following quotations:

"Guided videos made me active while watching" (PST-5).

"Guided videos boosted my awareness especially when I knew the interaction pattern beforehand. I felt like I needed to focus more on the details. I always considered if a part/section or any kind of information of the video will be questioned later or not. This fact kind a puts you on tenterhooks and you feel like you need to do better to comprehend" (PST-2).

"Guided videos were much more useful as it required constant attention and asked questions as the video proceeded" (PST-10).

"In my opinion, guided videos are more useful than the unguided ones since they ask questions constantly and that keep you in the video" (PST-11).

In a similar vein, two participants commented on the effectiveness of guided videos on their increasing awareness about instructional process in the videos and emphasized the role of questions embedded in the videos:

"The variety and kind of the questions matters a lot. But most of the time you do not know exact nature of the questions. You just anticipate them; "like is this bit of information going to be asked later or not"" (PST-2).

"If we had just watched the videos and wrote our own feedback, I'm sure we would have missed many important points. The questions in the content of the videos were a warning to us for the parts that we should pay attention to in the rest of the time" (PST-8).

Another participant highlighted the options of EdPuzzle which allowed them to stop, rewind and rewatch the segments in order to respond to the embedded questions in the guided videos, thereby proceeding one's own pace:

"Guided videos are better than unguided ones because you can watch the video, you can stop it and take notes to answer the questions" (PST-6).

However, because of the same reasons mentioned above, that is, the embedded questions and the options of rewinding and rewatching videos, two of the participants found guided videos distracting and stated that they preferred unguided videos to guided ones, as shown in the following quotations:

"I think unguided videos are more useful because in guided videos I sometimes had to rewind the video in order to answer the questions" (PST-12).

"Guided videos interrupted our attention to the videos. We tried to answer so many questions both on guided videos and for our assignment. But unguided videos were good. I learnt so many things" (PST-1).

Interestingly enough, when pre-service teachers were asked to choose what type of videos (guided vs. unguided) should be used in teacher education, these two pre-service teachers who favored unguided videos joined the rest of the participants, and they all had a preference for using guided videos in teacher education programs for several purposes such as

illustrating different approaches, methods and techniques or designing different materials for different stages of a lesson:

"Teachers could easily make any non-interactive video interactive by using applications such as "EdPuzzle". Or in most cases you do not even need an application to make students interact with a video in pre, while or post stages" (PST-3).

"Maybe some clickable video stories, some animated videos with questions can be used especially for kids" (PST-5).

"Although it is difficult to prepare and evaluate guided videos, it seems more possible with guided videos to observe and follow the problems, methods and approaches in the ordinary course of the lesson" (PST-10).

Discussion

Analysis of the reflective journals and open-ended questionnaire responses indicate that viewing videos of experts have positively influenced the participants' reflection process and understanding of L2 instruction. The participants mostly agreed on the facilitative effects of viewing videos of experts. This finding is corroborated by previous research which indicated the benefits of viewing videos of others (expert teachers) in teacher education (Blomberg et al., 2013; Calandra et al., 2014; Darling-Hammond, 2006; Harford & MacRuairc, 2008; Harford et al., 2010). The participants reflected on a variety of topics in both guided and unguided videos. They particularly stated that viewing videos increased their awareness about methods and activities, enhanced their observation and communication skills, increased their knowledge about classroom management, broadened their perspectives of L2 instruction beyond geographical frontiers and helped them and the teacher educators (the researchers) to compensate for the lack of real classroom observations due to the Covid-19 pandemic.

Although the study did not set out to compare the two conditions of viewing, data analysis indicated different patterns of reflections in both modes, which required quantification of qualitative data and thus comparative interpretations of the findings. Analyses of reflective journals indicated that viewing guided videos, which included questions automatically directed at the pre-service teachers in the interactive video platform, not only increased the amount of reflection but also increased the depth and variety of the topics of reflection. While there were a total of 227 reflection comments in unguided videos, this increased to 261 in guided videos. This can be considered as a facilitative feature of using interactive videos in reflection. Furthermore, the overall levels of reflections also increased in guided video condition. With guided videos the participants had more practical perspectives in their reflective writing and the amount of critical perspectives also increased exponentially from 4 to 10. On the other hand, in unguided videos, reflections entailed a high percentage of technical perspectives (43%).Although there is no previous research (to our knowledge) on the effects of video-embedded questions on the quality/type of reflections, increasing amount of practical reflection suggests that the pre-service teachers have made more context-specific reflections, which reveals the role of guided videos in directing prospective teachers to more specific issues in their observations. The increasing amount of critical perspectives, which is the highest level

reflection according to Van Manen (1977), in reflective reports in guided videos also demonstrates facilitative effects of guidance. As critical perspectives in reflection can be regarded as overarching comments that indicate awareness of teacher candidates about context-specific incidences and also their ability to intertwine them with broader social, cultural and political perspectives. The findings clearly indicate that video-embedded questions can enhance quality of reflections by pre-service teachers.

While the methods and materials were the main reflection topics in both conditions, the percentages for most topics of reflection varied between these two conditions. The overlapping points of reflection, which also induced the highest amounts reflection, indicate that pre-service teachers can already focus on important aspects of L2 instruction without guidance. This can be attributed to the fact that they were senior students, who had already studied what to focus on in L2 class in teacher language skills courses. While the participants did not reflect on the inclusion of diverse students in guided videos, they reflected on this topic in unguided videos. This suggests that guidance provided via questions can limit the variety of topics pre-service teachers reflect on. The lack of reflection on teacher's roles in unguided videos might indicate that pre-service teachers lack the ability to analyze instruction in a broader perspective to include teacher's role. This can also indicate a gap in their training on reflective practice in micro-teaching classes, a realization of the researchers, who are also the trainers of the participants. In sum, the findings suggest that topics for reflection can be operated via questions embedded in the videos.

Analysis of the data from the questionnaire also revealed the superiority of guided videos. Although the participants considered viewing videos of experts from all the world in online platform as a useful practice, their comments with regard to guided videos were particularly more positive. Analysis of the questionnaire responses revealed that their positive attitudes can be attributed to the questions which directed their focus to specific points and helped them to decide what to focus on and from which aspects they should evaluate each teaching incidence. Furthermore, thanks to the time-stamped questions, the participants were able to reflect more on the videos. The participants overwhelmingly (10 out of 12) stated that the questions facilitated their reflection process by drawing their attention to more specific in-class incidences through questions. More specifically, the participants pointed out that the guided videos made them more active, focused and attentive during viewing the videos. They were able to catch many important points and watched the rest of the videos by being more sensitive to the issues raised by these questions. This suggests that guided videos can increase overall awareness of pre-service teachers with regard to the aspects highlighted via questions. Two negative comments on the guided videos pointed out that rewinding the videos to answer some questions distracted the flow of viewing and that questions embedded in the videos increased their work load as they wrote similar things in the reflective journals. Negative comments can be attributed to individual differences between teacher candidates. Thus, pre-service teachers can be offered guided or unguided videos based on their preferences as long as lack of guidance does not lower the quality of reflection. Similarly, limited research on the use of interactive features in video viewing also pointed out their facilitative effects in reflection (Baecher & Kung, 2011; Batlle & Miller, 2017; Davies et al., 2017; Hockly, 2018; Schworm

& Renkl, 2007). Batlle and Miller (2017) revealed that these platforms made observations quicker, easier and more to the point. Likewise, Davies et al. (2017) found that teachers could focus on examples of practices tagged by their peers quicker and more competently. In line with the perceptions of the participants in the current study, who highlighted the facilitative effects of interactive videos except for two participants, Schworm and Renkl (2007) argued that instructional aids such as prompts while viewing can also lessen the burden on overloaded prospective teachers. Similarly, Hockly (2018) reported that video annotations enabled teachers to observe themselves and others and provide feedback and commentary in a secure online medium. Increasing amount of reflections and deeper levels of reflection with guided videos suggest that interactive videos can enhance selective attention and knowledge-based reasoning, two important skills for reflection (van Es & Sherin, 2008). The consistent findings of previous research and the current one can be explained with the additional facilitative effects of time-stamped questions, which helped the prospective teachers to attend to salient aspects and think more critically on them.

Conclusion

Considering the wide range of perceived benefits of viewing videos, the results suggest that videos should be an integral part of teacher education curricula. Viewing videos can give teacher trainers the opportunity to broaden pre-service teachers' perspectives of L2 teaching and learning practices in real classes from a wide range of L2 classes all over the world, which is otherwise impossible for them to observe. Embedding questions to guide the reflective practices of pre-service teachers can enhance the quality of reflections. Therefore, teacher educators can take advantage of this emerging technology in their teacher education practices. They can highlight certain aspects of L2 classroom practices and help prospective teachers to reflect more specifically on instructional choices, underlying theories and assumptions. In this way, they can also help pre-service teachers to have deeper levels of reflections and bridge the gap between theory and practice. Furthermore, by embedding discussion questions at certain video frames, teacher educators can foster discussion among pre-service teachers on their own or others' videos, and in turn elicit more versatile reflection and better practice through creating a community of practice. In addition, the questions embedded in the video should be carefully chosen to represent a wide range of topics. Besides, teacher educators can also add some more unspecific open-ended questions to allow for freer reflection on the video by prospective teachers.

The findings of the current study should be read with caution as it suffers from some limitations. First of all, this study explored the reflection of pre-service teachers who viewed the videos of others but not their own videos. The researchers could have collected more data through online interviews or focus groups. The study could have been more extended covering two terms of the practicum to explore the issue further. In addition, the researchers could have used a different interactive video platform which allows users to interact with each other through discussion boards. Such an experience could have increased interaction among the participants and led to deeper levels of reflection, revealing a truer potential of interactive

videos. Further studies can also include more videos from different proficiency levels and contexts from different parts of the world. Research can also examine how pre-service teachers' observation and reflections of expert L2 teachers are translated into teaching practices.

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