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Student Teachers' Video-Assisted Collaborative Reflections of Socio-Emotional Experiences During Teaching Practicum

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This study explores video as a tool for student teachers in reflecting upon their own teaching practice. The particular interest is in exploring, what kind of socio-emotional experiences did the student teachers describe during the video-assisted collaborative reflection and what benefits student teachers experienced through the video-assisted collaborative reflections? The study implements a video-observation model (Participatory and Empowering Video Analysis- model, PEVA^{TM}) developed for a professional teacher education programme and investigates the model from student teachers' perspective. The participants are student teachers in an international professional teacher education programme (n = 24) at a university of applied sciences. Student teachers video recorded their own teaching sessions displaying their work in different roles: teacher-led content specific instructions, group working sessions and individual student guidance and tutoring sessions. Student teachers were advised to annotate their own videos with a video-reflection tool by focussing on socio-emotional interactions, non-verbal elements of interaction and moments, where students felt successful and empowered. In addition to self-reflection, videos were viewed and annotated by a peer student and a teacher educator. After the phases of reviews and annotations (self-,peer-, and teacher annotations), an hour-long collaborative reflective feedback discussion was held either face-to-face or online. These sessions were facilitated by the teacher educator, involving the videoed student and the reviewing peer. Video annotation data was transcribed, and, in addition, the student teachers' reflective writings (54 pages) and teacher educators' notes of the reflective feedback sessions (20 pages) were used as data. The results of this study indicate that student teachers viewed the video reflection process as helpful in making socio-emotional experiences visible and tangible. The video annotation tool was recognised as useful for indicating socio-emotional experiences and making them more concrete thus resources for reflection. A combination of own, peer's and teachers' annotations functioned as a collaborative tool for increasing awareness of

different socio-emotional experiences. By observing videos of their own teaching as well as teaching videos of their peers, student teachers were able to evaluate teaching situations holistically and observe connections of their own socio-emotional behaviours to their students.

Keywords: socio-emotional experiences, socio-emotional competence, self-reflection, collaborative reflection, video-assisted reflection, teaching practicum

INTRODUCTION

Socio-emotional competence is crucial in the teaching profession and thus its development is pivotal during teacher education (Jiang et al., 2016). Teachers' socio-emotional competence can be defined as a skill for emotional understanding and emotional expressions (Jennings and Greenberg, 2009; Zhou and Ee, 2012). Teachers have dual responsibilities, to not only improve their own socio-emotional competence, but also to support the development of their students' competences from the very beginning of their career (Hagenauer et al., 2015). Professional development in terms of socio-emotional competence is a long-lasting process, starting from initial teacher education and continuing during the teaching career (Richter et al., 2011; Niemi and Nevgi, 2014; Kyndt et al., 2016; Häkkinen et al., 2017; Näykki et al., 2021a). Particularly teaching practice offers ideal opportunities and building blocks for professional and socio-emotional competence development (Colasante, 2011; Hascher and Hagenauer, 2016). However, in order to fuel development processes and to assist student teachers to become more aware of their socio-emotional competence, focus for more systematic reflection is needed (Etscheidt et al., 2012; Näykki et al., 2017a, 2021b).

The roots of reflection date back to the 1930s when Dewey's (1933) writings on reflective thinking and the role of experience in learning emerged. Since then, several scholars have further developed and redefined the concept of reflection (Boud et al., 1985; Schön, 1987; Mezirow, 1991; Eraut, 2004). Reflection is defined as an intellectual and affective process when an individual engages with their experiences and constructs new understanding and appreciation based on the reflected experiences (Dewey, 1933; Boud et al., 1985). Behavioural and cognitive operations are targets for reflection, but also experienced and expressed emotions can be at the focus of reflection activities (Näykki et al., 2021b). Video-assisted reflection has shown to be a useful tool to support both teachers' and student teachers' reflection and their professional and paedagogical development (Wang and Hartley, 2003; Maclean and White, 2007; Calandra et al., 2009; Kong et al., 2009; Tripp and Rich, 2012; Coffey, 2014; Gaudin and Chaliès, 2015). Using video-assisted reflection has been observed to facilitate teachers to recall and articulate their thinking and socio-emotional experiences (Powell, 2005) and for example, situational needs and possibilities for emotion regulation (Fried, 2011; Coffey, 2014; Hoffmann et al., 2020) from the observed authentic teaching situations.

Although video-assisted reflection practices are widely used in teacher education and their benefits in improving students' performance have been established (Tripp and Rich, 2012), less is known about its usefulness in collaborative reflection situations. Some recent studies have focussed on exploring how pair or small group reflections can function as a supportive resource in teachers' professional development (Tripp and Rich, 2012; Clarà et al., 2019). However, understanding of peers' role in video-assisted reflection is still scarce and particularly in contexts of exploring one's socio-emotional experiences. This study aims, firstly, to shed light on how video-assisted collaborative reflections were used in exploring student teachers' socio-emotional competences, and secondly, contribute to the literature on video-based reflections as a paedagogical and methodological tool.

TEACHERS' SOCIO-EMOTIONAL COMPETENCE

Teachers' socio-emotional competence includes competences to understand one's own and others' emotions, skills to regulate emotions and empathic behaviour toward self and others as well as competence to develop positive relationships during their teaching career (Jennings and Greenberg, 2009; Zhou and Ee, 2012). In general, socio-emotional competence support teachers to feel comfortable in their work and prepare them for teaching and interaction situations (Justice and Espinoza, 2007). Teachers' skills for emotion regulation are particularly needed when individuals experience inappropriate emotions as compared to their personal or socio-cultural standards, or they experience emotions at inopportune times or at the wrong intensity level (Boekaerts, 2011; Gross, 2015). Gross (1998) defines emotion regulation as a process in which individuals influence which emotions they have, when they have them, and how they experience and express these emotions. Through regulation, emotions can be reduced, intensified, or maintained (Rimé, 2007). Within a social learning or interaction context, individuals can regulate their own, each other's or their socially shared emotions (Bakhtiar et al., 2017; Hadwin et al., 2018). Adding complexity to social level regulation is that each person for example within a pair or group or in general in classroom context brings different situational interpretations and regulatory skills to the situation (Järvenoja et al., 2013, 2019). Regulation skills may vary, and individuals may not know how to properly share and interpret emotional experiences or interactions, which, in turn, could result challenges in their emotion regulation (Näykki et al., 2014).

Studies have shown that socio-emotional competence in general and emotion regulation skills in particular are meaningful for teachers' personal wellbeing as well as for their pupils' wellbeing and to pupils' socioemotional competence development (Roorda et al., 2011). In other words,

socio-emotionally competent teachers are more often able to regulate their emotions and to create a positive socio-emotional atmosphere in their classrooms and can model positive behaviour, and therefore support pupils in their socio-emotional competence development (Durlak et al., 2011). Teachers' professional development including the development of socio-emotional competence is a multifaced and continuous process and needs systematic individual reflection to aid the process (Rogers, 2002; Etscheidt et al., 2012; Näykki et al., 2021b).

TEACHERS' SELF-AND COLLABORATIVE REFLECTION TO ENHANCE SOCIO-EMOTIONAL COMPETENCE DEVELOPMENT

In general, self-reflection is important for all, but it is particularly important for teaching professionals who need to be able to analyse and reflect on how their behaviour supports the development of their own and their pupils' skills. One central context in practicing reflection skills during teacher education is student teachers' school practice. Hagger and McIntyre (2006) emphasise that the process of becoming a teacher can be an emotionally demanding experience and during the school practice student teachers may experience various negative and positive emotions.

Goddard and Foster (2001) stress the praxis shock of student teachers facing the challenges of classroom realities, for example when experiencing shortcomings or challenges in classroom interactions (Dicke et al., 2014; Hagenauer et al., 2015). The praxis shock may create feelings of stress, sense of weariness and vulnerability (Caires et al., 2012). Hagger and McIntyre (2006) identified three emotional aspects of teaching practicum: when negative emotions can be provoked by (a) discrepancies between student teachers' expectations and classroom realities, (b) the experience of a lack of competence in one's role as a teacher, and (c) necessary adaptation to institutional norms that may differ from student teachers' individual norms (Hagger and McIntyre, 2006). Respectively, also positive emotions can be experienced, for example, due to growing knowledge and skilfulness as well as a sense of efficacy, flexibility and spontaneity in their performance and interactions (Caires et al., 2012). Also, other positive emotions have been reported relating to student teachers' practice, namely feelings of being interested and enthusiastic (Hascher and Hagenauer, 2016) and experiencing enjoyment and gratefulness. More specifically, both negative and positive affective states and emotions experienced within the teaching practice can derive from a variety of factors. Those experienced emotions can function as a support for learning if a student teacher is provided with an opportunity to reflect upon, for example, the meaning and effects of aroused emotions. Also, self-reflection affords individuals a chance to reflect on how their own behaviours, including emotional expression, have an effect on others (Thompson and Fine, 1999; Näykki et al., 2014; Bakhtiar et al., 2017). However, often learning and interaction situations evolve rapidly and the opportunities for reflection in-action may be missed, thus we want to emphasise that reflection on-action is valuable (Thorsen and DeVore, 2013; Thomson and Thomson, 2018).

Tripp and Rich (2012) highlighted that reflection is more beneficial when it is complemented as a peer reflection and/or a collaborative reflective discussion. Incorporating social connections into reflection offers opportunities for teachers and student teachers to view their teaching actions, related positive and negative emotional experiences, and progress from a new perspective (Wu and Kao, 2008). Peer involvement and collaborative reflection necessitates mutual trust between persons involved in the process making the participants more accountable for changes (Tripp and Rich, 2012). Previous studies have indicated that participants reflecting upon each other's thinking and experiences, have shown to be engaged in deeper-level interaction processes compared to participants whose understanding and experiences are not actively reflected upon (Goos et al., 2002; Näykki et al., 2017b). For example, Roscoe and Chi (2008) evaluated events were explaining one's own actions and understanding by using reflection statements, such as "I didn't understand this before," was useful for making new connections and building understanding at the social level. Recent findings also from our own study (Näykki et al., 2021b) as well as from Lee et al. (2015) are related to this finding by indicating that reflecting thinking processes and emotional experiences plays a key role in high-quality engagement in a joint activity.

Although several methods and tools have been found useful in supporting student teachers' self- and collaborative reflection (Harlin, 2014), it still is a challenging skill and not a naturally occurring process, thus, teachers and student teachers may need support in developing and mastering their reflection skills. Teacher educators utilise number of methods to aid student teachers' reflection, for example, commonly used tool is a reflective writing process such as a learning diary (Tynjälä, 1998). Various structured reflection templates, such as, empathy maps, Johari window and online instruments as well reflective individual or group discussions can be helpful for reflection (Williams and Svensson, 2020), and pictures and other symbolic materials are useful in aiding students to verbalise feelings. However, reflection processes are often time-consuming and demanding as individuals are required to observe themselves from different perspectives, for example, their behaviours, actions, communication, and interaction (Tripp and Rich, 2012). To gain insights of and offer a possibility for student teachers to reflect on their emotional aspects, video-observations as a reflection method was utilised in this study.

A SYSTEMATIC VIDEO-OBSERVATION AS A TOOL FOR COLLABORATIVE SOCIO-EMOTIONAL REFLECTION

One method to provide reflection opportunities is a systematic video-observation of one 's real work situations, where student teachers can observe, analyse and reflect the practice in the light

of selected paedagogical theories. Digitalisation has expanded opportunities for teacher education to utilise video-supported paedagogy (Pellegrino and Gerber, 2012; Christ et al., 2017), also as a means of support for student teachers' reflection during teaching practice (Colasante, 2011). Video offers an opportunity to capture the richness and complexity of teaching in a manner that encourages a deliberate examination and reflection of practices. Prior research has shown that reviewing and analysing video recordings of one's own work can support teachers' and student teachers' professional development and socio-emotional competence development (Fadde and Sullivan, 2013). Reviewing teaching practice from videos offers a possibility to focus on some specific micro-level aspects, such as, interaction, questioning strategies and non-verbal communication (Kpanja, 2001), which are often difficult to reflect upon without authentic materials as a tool for recalling the situation in detail. Video assisted refection has been examined to improve student-teachers' critical reflection skills (Calandra et al., 2009; Cattaneo et al., 2015, 2016), encourage them to see the students' point of view (Goeze et al., 2014), develop teacher–student relationships (Mercado and Baecher, 2014) and support their paedagogical practices (McFadden et al., 2014). Analysing own work from video has further been shown to encourage teachers to notice their strengths and weaknesses, and thus to set new development goals (Coffey, 2014).

The basic assumption is that observing own work, as well as peer's work (Wu and Kao, 2008), is empowering in making changes and developing working practices. Wu and Kao (2008) applied video-enhanced education technology tools and platforms in developing and studying an asynchronous peer feedback process in pre-service teacher education practicum. Based on their findings, the pre-service teachers agreed that peers' feedback based on video recordings was fair and useful. The process of replying to peers' feedback increased their opportunities to reflect on their teaching. Moreover, video analysis supports teachers to indicate possible differences between their perceptions and practices (Rich and Hannafin, 2008).

To further enhance the development of student teachers' reflection skills and their professional identities, as well as their professional growth, a Participatory and Empowering video analysis- model (PEVA^{TM}) (Burns and Laitinen-Väänänen, 2018) was developed. The paedagogical principles behind the model, stems from four perspectives: strengthening student-teachers' reflective skills; supporting the integration of espoused theory and theory-in-use; strengthening a sense of participation and self-efficacy, and affording social level reflection (i.e., pair and collaborative working with videos). In practice, the PEVA^{TM} model consisting of six different steps, as shown in **Figure 1**, is a process that student teachers follow after they have video recorded their planned teaching and learning sessions.

Step 1: The practical implementation of the model begins with practising how to use videos. It also includes planning learning activities to be used as well as setting intended learning objectives for the sessions. During the first step, student teachers practise video-making and being recorded themselves by preparing short video documentaries about their work and roles as practitioners. The aim of this training phase is to lower the threshold for videoing oneself and conducting a guided self-evaluation. These exercise videos are discussed in a hybrid teaching session facilitated by the teacher educator with the students. After the class discussion student teachers will create written lessons plans with the learning objectives and activities to be used in recorded teaching practice sessions.

Step 2: In the second phase, the student teachers record the planned teaching sessions. The recorded sessions should last a minimum of 45 min and videos of three different facilitating learning sessions are required. The videos need to display how student teachers work in different teacher roles, such as acting as a small group facilitator, a personal tutor, or a practical skills demonstrator. The student teachers themselves are responsible for recording the videos on a platform provided by the university and for sharing the videos with their peers and teacher educators.

Step 3: In the third phase, the student teachers independently watch, reflect, and analyse the videos with the help of the given structure for a self-reflection. The structured form aims students to direct attention to paedagogically relevant situations (including successes and challenges) and their social-emotional experiences.

Step 4: The next phase is for peer students to analyse the videos. Two peer students independently analyse the videos and give written comments on the feedback form that focuses on three professional teacher competence areas defined in the curriculum, i.e., facilitating learning, creating future and developing teacher identity.

Step 5: In the fifth phase, the student's own analysis and the perspectives raised by the peer students are notified in a reflective analysis discussion facilitated by the teacher educator involving a student teacher and a peer student. The teacher educator will have watched the videos sent by the student teacher and read the written observations made by both the student and their peer evaluators. Also, the written feedback provided by a local tutor from an educational organisation in where teaching practice took place will be discussed. The reflective feedback discussion is supported by a framework, which is based on a dialogical and empowering approach to exchange viewpoints of the analysed videos. The discussion focuses on identifying and articulating specific learning situations, linking theory and practice, and giving meaning to paedagogical and social-emotional experiences by drawing on different levels of reflection.

Step 6: In the model's final phase, the student teacher identifies areas for further development to enhance their own teaching and mentoring competences and choose some new relevant practices to try out for themselves. The final stage also includes the student's final written reflections of their understanding of the paedagogical approaches chosen and their experiences of the reflection process.

Preliminary findings from the PEVA^{TM} -model, as well as studies in the field (Wu and Kao, 2008), have highlighted that the reflective discussions on a social level with peers and teacher educators appear to be highly relevant when the aim is to change one's behaviours. In general, video assisted reflection facilitates awareness of how one's own understanding of learning is manifested in teaching activities. Central issue here

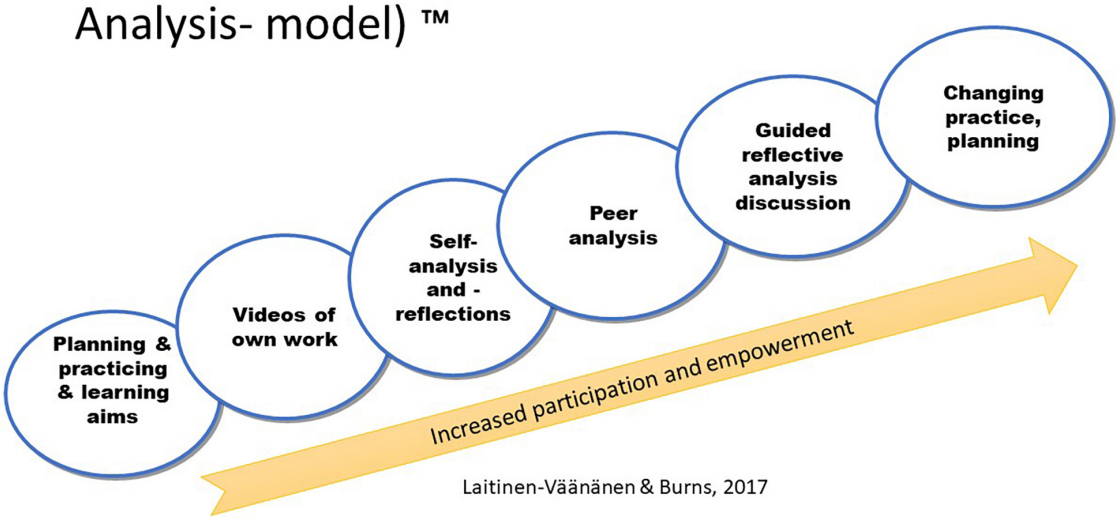

FIGURE 1 | Participatory and Empowering Video Analysis- model, PEVA™.

is the distinction between espoused theories and theories-in-use (Argyris and Schön, 1974), which means to reflect and become aware of the values and theories, which drives actions as teachers. Theories-in-use is described as worldview and values, which guide person's actions, and the espoused theories are something, people believe guide their behaviours (Harnett, 2012). Few people are stated to be aware of their theories-in-use or that these are not always the theories they espouse or adopt. Watching own actions or practices from videos can help teachers to indicate differences between their perceptions and practices (Rich and Hannafin, 2009). Thus, by combining espoused theory and theory-in-use, we create the opportunity to support student teachers in becoming more aware of their thinking and theoretical solutions behind their actions, as well as acknowledging how they work in practice. A good way of discovering the contradiction between thoughts, perceptions, and actions is possible through a guided analysis of own work activities on a video.

In addition, being an effective tool to analyse theoretical and practical standpoints, videos can also aid the reflection to develop deeper understanding of socio-emotional competences (Stavroulia and Lanitis, 2019; Tarantini, 2021). With a help of a facilitator such as teacher educator or peer, video clips can be used as mirrors to reflect on socio-emotional interactions (Dufrene and Young, 2014). Also, Pirker and Dengel (2021) discovered in their study on the potentials of 360°-videos that recorded situations and experiences they convey seem to be very suitable to enhance socio-emotional competences. The value of using videos for collaborative reflection on socio-emotional competence seems to lie in assisting student teachers to reach deeper insights than would be possible *via* solitary reflection. Although theoretical and paedagogical models for the use of video as a reflection tool exist, a profound understanding of how video could be used in a paedagogically appropriate manner, and in particular to support reflection in collaborative learning and reflection of socio-emotional experiences, appears to be lacking.

AIM

The aim of this study is to explore videos as a tool for student teachers in reflecting upon teaching practice. The research questions are: what kind of socio-emotional experiences did the student teachers describe during the video-assisted collaborative reflection and what benefits student teachers experienced through the video-assisted collaborative reflections?

MATERIALS AND METHODS

Context and Participants

This study was conducted in a Finnish university of applied sciences that offers paedagogical studies for post-graduate students to gain a formal teacher qualification required in Finland to teach their specific subjects. The professional teacher education programme is designed for adult learners who already have a master's degree and minimum of 3 years' work experience from their field of expertise. The programme consists of 60 ECTS credits corresponding to 1 year of full-time study. However, the majority of the students study on a part-time basis while working, thus, the study time varies from year and a half to 3 years depending on an individual student's background and the competence development plan, which they are required to create at the beginning of their studies. The curriculum of the programme is based on interconnected competence areas: facilitating learning, creating and developing teacher identity. It also includes a period of practical training.

The Facilitating learning competence area consists of a teaching practice course. This course is the largest in the programme, emphasising the importance of gaining practical experiences of teaching during the studies. Being at core of the teacher education studies, student teachers are encouraged to experiment different paedagogical approaches in varied learning environments and build their own paedagogical theory-of-practice. Prior to the practical training, student teachers are required to consider and define the competences and specific learning goals they want to gain and deepen during the implementation. Also, appropriate plans, such as, a general paedagogical plan including, e.g., extent, content, context, and detailed lesson plans are completed before the practice. Teaching practice is completed in an upper secondary, tertiary, or higher education organisation and it is supervised by a local mentor from the organisation in question and the teacher educator. The assessment of the teaching practice is criteria based, focussing on self, peer, tutor and teacher educator evaluations and reviews.

Data Collection and Analysis

The data for this study was collected from two groups of students studying in the international professional teacher education programme (N = 42 student teachers) during their practical training between 2017 and 2019. Majority of the students were from Europe (n = 32). The rest were from Asia (n = 5), Africa (n = 3), South America (n = 1), and North America (n = 1). More than half of the participants were Finnish. Students' ages varied from 27 to 58 years. As the participation for the study was voluntary, 24 students (n = 15 female, n = 9 male) agreed to take part in the implementation.

The study was carried out by utilising a video-observation model (PEVA^{TM}) (Burns and Laitinen-Väänänen, 2018). As part of their practical training, the student teachers were instructed to video record a minimum of three different types of teaching situations during their teaching practicum where they evidenced working in different teacher roles: teacher-led instructions, group working situations and students' individual guidance and tutoring sessions. Video's length varied between 25 and 90 min. When the videos were uploaded onto the video sharing platform, students were advised to annotate each of their videos by using a timestamp and short written descriptions. The instructions for reflective annotations prompted the student to focus on any socio-emotional interactions, non-verbal elements of interaction (e.g., tone of voice, articulation, pace of talking, eye contact, other facial features, and use of hands), and finally indicating any moments where they felt being successful and empowered. Notifying these positive moments were aimed at increasing student teachers' emotional self-awareness and social awareness that both are characteristics of a socio-emotionally competent teacher (Virtanen, 2013).

In addition to self-reflection, the videos were viewed and analysed by a peer student and a teacher educator. Students were asked to find a peer with whom they watched and analysed all the videos of both. The focus of peer-reflection was to provide feedback and to ask further questions from the student whose teaching practice was reflected upon. After self, peer, and teacher annotations, a reflective feedback session was organised that was attended by the student teacher, the peer, and the teacher educator. The data consisted of the video annotations made by the students on their recordings on the video sharing platform, student teachers' reflective writings (54 pages) and two teacher educators' discussion notes (20 pages) from the reflective feedback discussions. These discussions lasted from a minimum of 1 h to an hour and a half and were conducted either face-to-face or online. The discussions followed dialogical and empowering approach. Teacher educator opened and closed the session but offered space for both the student and the peer to initiate topics to discuss.

The data was analysed utilising qualitative thematic analysis (Braun and Clarke, 2006). The analysis process was iterative and progressive, including phases of reading, re-reading, analysing, and verifying the interpretations of the texts. In the first phase, the texts were read intensively to get familiar with the whole data. In the second round the episodes that interpreted to encapsulate socio-emotional experiences during the video-assisted collaborative reflection and benefits of experience were noted and marked. Next, the analysis focussed on those selected excerpts. They were analysed by identifying content and structure related similarities, differences, and patterns. Based on that, the data was thematically grouped based on the two research questions and the groups were named descriptively.

In the terms of ensuring the trustworthiness of the separate coding process, and improving the credibility of the study, the encodings and interpretations were jointly discussed. The subsequent phases were conducted in close collaboration among the authors by joint discussions to compare and summarise the findings in the line with the research questions. The data collection and the preliminary analysis was conducted by two of the researchers. The final interpretations were discussed and made with all the researchers and authors of this article.

RESULTS

The results of the research questions, what kind of socio-emotional experiences did the student teachers describe during the video-assisted collaborative reflection, indicate that the student teachers' socio-emotional experiences were strong and closely intertwined with the reflection activities. The entire process of utilising the PEVA^{TM} model as an analysis and a video reflection tool offered the students an opportunity to access and recall their emotions and experiences during the teaching situations. The range of emotions that student teachers described varied from fear and intimation to fulfilment and empowerment.

Fear and Intimidation

Prior to the onset of the process some student teachers expressed feelings of being cautious as the idea of making videos of teaching sessions was considered difficult and even intimidating. The practical aspects in the process, such as, asking for permissions from their students, recording teaching sessions, saving, and sharing the videos with peers and the teacher educator, was considered difficult and brought up some negative emotions. *"The idea of having to review the video recordings of the sessions*

I taught as part of my teaching practice was a daunting one. In its initial phases it was pure agony to watch each of the videos" [ST 20, 2].

Video as a tool was seen as revealing and unforgiving. This was evident when one of the student teachers described it as a "mirror, which opened a window for me to see myself from an audience's perspective." The metaphor of a mirror offered the students a possibility to view one's positive and negative aspects. Sometimes the imagined view of themselves as a teacher and seeing the reality on the video caused some confusing feelings and made students think that something needed to be changed. This experience was shared and the need for improvement was acknowledged even though that student had prior teaching experiences. *"The first thing that caught my eyes when I started reviewing my work, is that my image in my head and my image don't match the way I thought. It was hard to see all my actions and all my expressions the way other people see them. My facial expressions, body language, and tone of voice, I felt that I have to work on them"* [ST 17, 1]. *"The video recording was an eye-opening experience. I have been teaching for some years now. Yet, I felt that I have to make changes in each one of my sessions to improve"* [ST 21, 1].

The results revealed that the initial stage of conducting the first self-analysis based on the video-recorded session was experienced as the hardest. Some students postponed the task for days, even for a week as one of the students explained. The initial phases of the student teachers' analysis process focussed on external issues, for example talking patterns, general appearance and some negative feelings attached to them. Several viewings and getting used to seeing themselves on the video, released this initial tension and anxiety, and made it possible for them to also reflect upon issues other than just their appearance, voice, manners or non-verbal communication. *"I didn't dare to watch my videos for a week. Finally, I asked my kids to watch it and when they said to me 'Dad, you're not too bad', I watched and reviewed it myself" [ST 9, 2].*

> *"It was awful to watch myself on camera, initially. However, the more I watched, the more accustomed I became to my own voice and appearance. Watching the video helped me notice my mannerisms and non-verbal communication, some of which I had already been made aware of by my friends and relatives. It took more time to get past those and in fact, some of them would be really good to get rid of entirely" [ST 8, 2].*

After overcoming the first hurdle of seeing and accepting oneself on the video, student teachers were able to shift their focus on the paedagogical elements together with socio-emotional features of teaching and the importance of student-teacher interactions. One of the students described that with the video reflection one could notice own teaching practices in detail. For example, one could observe when notes were used too often, socio-emotional reinforcement was not provided, or mistakes were not corrected. Also, as video provides a view to the classroom, one can notice their own movements, such as not moving around naturally when students are working in their tasks or with their groups. In addition to topics to be improved, video can show when the student teacher is succeeding to positively react to students' answers, providing verbal or non-verbal reinforcement, such as smiling, keeping eye contact, or nodding.

> *"On the second video I noticed that I sometimes read too much from a paper because I had made too good notes using whole sentences and because I was too excited to remember what I was supposed to say. I think I could have said to the students that I am checking my notes so that I won't forget anything I had planned to say to them about the feedback, it might have been quite natural that way" [ST 10, 5].*

> *"On all videos, I think that I did not give students enough positive reinforcement when they gave the correct answer, and on the other hand, did not say every time, if what they said was wrong. Also, I could have walked around the classroom more during the students' discussions. I acknowledge that I feel a bit uncertain about the interaction with students in class" [ST 10, 5].*

> *"While watching the videos I noticed that I often reacted to the answers with a smile (and eye contact). Sometimes my reactions also included verbal feedback like 'exactly.' During session three I often nodded or otherwise listened actively. . ./. . . All in all, I am quite happy with these teaching sessions" [ST 1, 6].*

Fulfilment and Empowerment

In addition to student teachers' self-reflection, they all received and provided a peer-reflection to their pair and also had a reflective discussion with the teacher educator and the peer. The reflective analysis discussions with the teacher educator and the peers were considered to be an eye-opening and empowering experience and supported student teachers' observations and interpretations of their own socio-emotional competences. The analysis process aided the students to identify various aspects on how to facilitate learning, to understand the complexity of a learning process and the various ways they interact with their students. Viewing a peer's video seemed to help the students uncover and even challenge their prior philosophies of teaching and learning, and to develop new understanding and meaning of facilitating learning. *"I felt much safer when a trusted person recorded the most significant stages of the session. In a way, I did not need to think about the process of recording, but rather I have fully concentrated on the process of teaching and learning from my teaching and working with the student group" [ST 11, 2]. "It gave me new ideas and insights on how teaching in practice is different from theory. I found out that teaching is a multidimensional process that includes not only teachers and learners but many other elements such as feelings, views, voices, settings etc." [ST 21, 1]. "Her [*the peer's*] feedback was primary positive although she encouraged me to be confident" [14, 6].*

It appeared that student teachers gained confidence and belief in their own professional skills as a facilitator of learning by taking part in the video reflection process. Student teachers explained that they gained a better idea of what a student's experience of them as a facilitator would look like. Some of them also expressed that they experienced a role change from expert to the learning facilitator, who walks along side during the learning process. "*Viewing and analysing the video of my teaching session was an eye-opening experience. It provided me with a more objective view of the process, in other words, it gave me a better*

idea of what a student's experience was of me as a facilitator of learning " [ST 14, 1] "This gives more confidence for me as a learning facilitator" [ST 24, 1]. "The role changed from expert to facilitator on the side in the learning process" [ST 9, 1].

Student teachers also highlighted the meaning of continuity with their peers as a reflection support process. By implementing the practice of continuous support, the students had the opportunity to continue their reflection discussions during the longer periods of time and it was seen as beneficial for their shared learning process, as these student teachers stated: *"Having the same peer-assessor had a huge impact, we sort of continued from where we left off 2 days ago. Also knowing your peer-assessor does help. This is also something to consider. I think that assessing someone from your own learning group possibly offers you more insights since you know your colleague a bit better, their personality, ways of working and so on" [ST 2, 1]. "./. . . I am eager to improve my skills. This training has been a privilege in a way that one gets feedback/forward. I am not sure how well getting feedback works in ordinary settings/working life–perhaps people are just too busy to give any feedback for a colleague, if one doesn't ask for it. Not too many, I guess" [ST 6, 6].*

Socio-Emotional Experiences as a Building Block for Developing One's Socio-Emotional Competence

Further analysis of the data to answer the second research question, what benefits student teachers experienced through the video-assisted collaborative reflections, revealed that socio-emotional competence seems to be associated with reflective skills. Video analyses focussing on student teachers' own and their peers' teaching seem to actualise and support reflections. Student teachers mentioned becoming more aware of their own actions as they were able to see themselves through the eyes of others. *"The videos have been an excellent reflective tool. . ." [TS 2, 1]. "Video-observation helped me to understand my own actions" [TS20, 1]. "Now I know how my students see me" [TS9, 1].*

Correspondingly, student teachers' awareness of their socio-emotional competence increased in this process, not only due to reflecting upon teaching practice, but also due to reflections of emotional experiences while teaching and recognition of their students' emotional reactions. The results show that the students, for example, named their own feelings and emotional reactions, and reflected upon how a socio-emotional connection was experienced as one of the most enjoyable moments. The video reflection afforded students to revisit and reflect upon this moment again and explain the experiences verbally. *"To me the most enjoyable moments in the videos were the moments when I could see that I had a connection to the students. Eye contact, smiles, reactions–anything that indicated that there was a true connection" [ST 1, 3].*

In addition, student teachers described having been able to create connections with their students' socio-emotional reactions and feelings. Accordingly, they were offered an opportunity to become aware of the importance of individual encounters with students, taking into account, for example, cultural differences as well as students' prior experiences, as observed in the following extracts. *"I do my best to pay much attention to the student's sensitivity. People of different countries and different cultures need to be handled differently" [ST 21, 1]. "Using video-recording during the paedagogical practice period has helped me a lot to receive a bit more objective view of how the paedagogical process was organised, what the students' engagement level was and how my and students' physical as well as mental/emotional interaction progressed during the session" [ST 11, 2].*

DISCUSSION

The study seeks to answer, what kind of socio-emotional experiences did the student teachers describe experiencing during the video-assisted collaborative reflection and what benefits student teachers described experiencing through the video-assisted collaborative reflections? We were particularly interested in student teachers' emotional sharing as a central part of socio-emotional competence (Zhou and Ee, 2012). Specifically, how student teachers viewed their emotional experiences and how they responded to the emotional experiences of others. This was done by observing how emotions were expressed, reflected upon and shaped in social interaction.

The results of this study indicate that video was a particularly useful paedagogical instrument that enabled student teachers to verbalise their socio-emotional experiences as well as notice their personal strengths and weaknesses. The repeated video-analysis shifted the student teachers' analysis focus from their own emotional experiences to a broader view of socio-emotional perspectives and their effects on classroom interaction (Durlak et al., 2011; Roorda et al., 2011). Based on our results, it can be concluded that peer-students' comments and feedback, i.e., collaborative level in reflection, opened students' reflection-perspectives more broadly and supported their professional development. This is in line with the prior results by Sherin et al. (2009) indicating that video reviewing, analysing, and discussing critical incidents in teaching, facilitates an expansion of professional vision and improvement of paedagogical reasoning. We conclude that observing others, who are in a similar position, in this case as student teachers in a practice period, was a meaningful learning experience for the students. Donelly (2007) has elaborated this idea further by identifying that students' self-efficacy can be enhanced when possibilities to observe others similar to themselves are provided.

Overall, we realised that reflecting on actions and behaviours in a teaching context is an emotionally laden process. Different kinds of emotions may surface repeatedly and invite a person to review and reflect where these emotions are coming from and what meanings one gives to them. Hess and Hareli (2019) argued that emotion expression and recognition is a socially embedded process, which characterise both the immediate context of occurrence as well as the broader sociocultural context. This argument is also in line with the socio-dynamic model of emotions (Mesquita and Boiger, 2014), which highlights that experienced and expressed emotions are typically derived from social encounters and also have functional roles within specific sociocultural context.

Sometimes recalling and reflecting emotions may be an arduous, even intimidating process. This is one reason why collaborative level reflection is particularly important. Similar findings have been made by Liu (2017) who sees the main potential of social collaboration for reflection being the introduction to and interrelations of multiple voices in the process. This can be achieved, like in our investigation, for example, with a trusted peer or a teacher educator who may provide support in reflection so that the difficult or strong emotions can be regulated by directing or suppressing them (Boekaerts, 2011; Gross, 2015; Järvenoja et al., 2019). We discovered one practical way of directing the emotional experience by channelling them toward paedagogical talk and methods to facilitate and support individuals' learning. Such discussions support finding and sharing, which is aligned with aims that have been noted to be important for successful collaborative reflection (Alles et al., 2018). Our results of the necessity to create a safe, respecting, and confidential atmosphere to mutually share emotional experiences and gain opportunities for empowerment are supported, for example, by Attard (2012) and Alles et al. (2018) who discovered that generating an environment of trust and confidence is vital among collaborating participants. To achieve successful collaborative reflection, we noticed that appropriate support and scaffolding provided by a teacher educator is required. This became evident in the teacher educator led discussions as reflecting one's teaching actions with a group raised many different emotions in student teachers. Teacher educators' sensitive and supportive approach was needed to scaffold the discussions to keep the focus on paedagogical contexts. To aid teacher educators' facilitative role we created a structure for the reflective discussions and offered an arena for sharing their experiences. Our findings reflect those discovered by Clarà et al. (2019) who investigated collaborative reflection in teacher education by video recording and analysing their weekly held reflective sessions. They discovered that the educational support in terms of social organisation of collaborative reflection and the teacher educator's assistance played a significant role in deepening the emotional sharing and reflections processes.

The importance of peer and teacher educator feedback on student teacher's social-emotional experiences was notified especially since our teacher education programme opted using video recorded teaching sessions as an assessment method. This system, as our study indicates, offered all parties more focussed and realistic basis for analysing teaching over in-person observed lessons by a teacher educator that relied only on memories. Analysing authentic video recordings, offered possibilities for a broader and more focussed peer feedback, which was beneficial for student teachers' paedagogical development. Peers used language and expressions that are more related to students' contexts than the more paedagogical language used by a teacher educator.

We acknowledge the limitations of this study. In this study, we implemented an analytical approach where student teachers' written reflections of video assisted observations were used as data. This captured individual subjective appraisals but did not capture authentic learning and interaction situations. However, in future studies the authentic situations with process-oriented approach could be explored to complement participants' experiences and interpretations with real interaction processes to draw a more comprehensive picture of socio-emotional experiences as a scaffold for socio-emotional competence. Also, pair reflection in this study can be regarded as a valuable part of the study, but also some limitations related to pair working needs to be acknowledged. As pairs worked together on reflection, they encoded, interpreted, and recalled information together, and in so doing, they created new knowledge and understanding that became embedded as an inseparable part of interaction (Miyake and Kirschner, 2014). This means that as pairs construct understanding and make meanings together, they may also construct socio-emotional experiences in such a way that they would not do individually or without explicit focus on the topic (Näykki et al., 2021b). It is thus unclear what is an emotional interpretation that is related to the actual learning process and what is related to the pair's discussion over it. Furthermore, it needs to be acknowledged that although our data justifies the conclusion of participants becoming aware of their actions and emotions, whether their practises and thinking processes will change, remains subject to further studies. Methodologically, one the aim of this study was to describe and examine the teacher education practices and their relation to the socioemotional competence. It can be argued whether it had some impact on the results that the teacher educators also act as researchers in analysing the data, they were involved producing together with students. To avoid the possible bias in this practitioner-oriented research the data analysis phase the interpretations made were jointly discussed and the process was described in the article.

The present study contributes to the research on student teachers' and practising teachers' socio-emotional experiences and their importance in facilitating learning processes and continuous professional development. As the teaching profession is an emotional practice and teachers' own emotions play key roles in developing teacher-student relationships and supporting learning, there is a need for further studies to investigate how to support teachers' emotional regulation. Further studies on building and maintaining one's socio-emotional competencies as a teacher would shed more light on this important topic.

CONCLUSION

The results of the present study of video-assisted collaborative reflections of socio-emotional experiences can be utilised by the designers of teacher education and teacher professional development programmes to create opportunities for collaborative reflection. Teacher education programmes should take aspects of emotional sharing and regulation as well as offering paedagogical methods to support their development into consideration when renewing their curricula. For example, collaborative reflection could be explicitly taught in teacher education programmes by highlighting its value in developing socio-emotional skills. This study points to a need for discussions and implementations on how to scaffold and nourish teachers' and student teachers' understanding and regulation of their

own socio-emotional skills and competences to facilitate quality learning.

DATA AVAILABILITY STATEMENT

Datasets are available on request: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

PN, SL-V, and EB contributed to conception and design of the study, and wrote sections of the manuscript. SL-V and EB conducted the data collection and the initial data analysis. PN wrote the first draft of the manuscript. All authors contributed to the final analysis and the interpretation of the data and contributed to manuscript revision, read, and approved the submitted version.

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