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Bridging the interactional gap: teachers' influence on pupils' face-to-face promotive interaction for socially responsive co-learning

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ABSTRACT

Part of a bigger project, this case study aimed to investigate the views and practices of teachers' (non)supportive activities for pupils' face-to-face promotive interaction (FtFPI) within cooperative learning (CL) group work. Two teachers at two primary schools in Bosnia and Herzegovina (BiH) who used the CL approach were purposefully selected for interviews and video recordings of their pupils' group work in Year 4 (9–10 years of age). Applying a thematic hybrid approach, the qualitative interview and video data were analysed using a modified framework of teachers' CL competencies through three FtFPI phases. For each phase activity, the findings illustrate the teachers' influences through planning, monitoring, supporting, consolidating and reflecting on pupils' FtFPI. The study highlights specific approaches relating to interpersonal behaviours and supportive communication, two aspects of FtFPI. Supporting teachers with the facilitation skills for a socio-supportive set of FtFPI capabilities has practical

implications for teacher education and future research for CL promotion in diverse classrooms and contexts.

Keywords: responsiveness, face-to-face promotive-interaction, co-learning, teacher's role

INTRODUCTION

Promoting pupils' social competencies and collaborative skills for learning together and being best prepared for their future social and working life where they successfully navigate societal diversity and changes are critical educational goals for twenty-first century teaching pedagogies (Colomer et al., 2021; OECD, 2019). Teachers who set the tone for heterogeneous classrooms by encouraging social interaction need to develop their pupils' cooperation skills and act as role models for their supportiveness and responsiveness to individual differences and motivation for learning (Cohen & Lotan, 2014; Jennings & Greenberg, 2009). A socially responsive pedagogy, such as cooperative learning (CL), provides social and academic advantages for pupils so they can become supportive co-learners for their own and joint achievements (Van Ryzin et al., 2020). Thus, the CL teachers have a pivotal role in helping pupils to connect with and support their groupmates, but this is challenging in practice (Buchs et al., 2017; Klang et al., 2020).

This article focuses on teachers' influence on pupils' face-to-face promotive interaction (FtFPI) that can lead to a successful CL process (Kristiansen et al., 2019; Johnson et al., 2013). In FtFPI, when addressing ways that pupils can encourage and facilitate each other's efforts in group work, the teacher's role changes from a transmissible model (the expert lecturer) to a transformative model (the facilitator who organises, acts as support and monitors the co-learning process) (Gisbert et al., 2017; Gillies & Boyle, 2010). Furthermore, in educational contexts where the transmissible teacher is still dominant, as in Bosnia and Hercegovina (BiH) (Branković et al., 2016), a CL pedagogy challenges their centrality associated with influencing pupils' autonomy so they can become the instigators of social and academic change (Sharan, 2014).

From a sociocultural perspective, teachers as facilitators are socio-pedagogical resources that influence how pupils' FtFPI functions in CL relationships. Directing pupils in a socially mediated environment, such as small CL groups,

teachers enable them to progress beyond their current zone of proximal development (ZPD) towards a higher level of mastery, becoming skilled, responsive and supportive co-learners (Vygotsky, 1978). Thus, Vygotsky asserts that what happens (e.g. dialogues, actions and activities) in the social environment through teachers' social mediation, using knowledge, competencies, beliefs and values in facilitating FtFPI, helps pupils' co-learning and development (Moll, 2014). However, the vital component for such a socially supportive group environment is positive interdependence among all co-learners grounded in Social Interdependence Theory (Deutsch, 1949). Accordingly, pupils are incentivized to promote each other's success where teachers reinforce pro-social behaviour on an on-going basis among all pupils (Johnson et al., 2013). Even though much research points out that linking teachers' support to pupils' group engagement is crucial in promoting pupils' cooperation, many teachers are not devoting themselves appropriately to small-group instruction (Buchs et al., 2017; Gillies & Boyle, 2010). Moreover, recent research points to the need to focus on pupils' promotive interaction in CL (Klang et al., 2020; Le et al., 2018).

Even though there is little research in the BiH context on CL implementation, quantitative studies have shown that teachers and pupils prefer classroom CL activities (Burgic et al., 2017). Moreover, recent studies have reported on pupils' FtFPI perspectives and practices in CL (Kristiansen, 2020, 2021). However, qualitative research needs to examine CL group work in more detail, focusing on the teachers' role in FtFPI in relation to CL activities.

To reduce this research gap, the present study aims to understand and discuss teachers' activities associated with pupils' FtFPI in small CL groups by investigating teachers' views and actions spanning three FtFPI phases of CL implementation (see Appendix A). The research question guiding this article is: *Which activities do teachers use, or do not use, to support pupils' FtFPI in small CL groups?*

PREVIOUS RESEARCH ON TEACHER'S IMPACT ON PUPILS' FTFPI WHEN CO-LEARNING

Helping pupils to learn cooperatively requires that teachers assume diverse roles and are engaged in developing supportive relationships for co-creating an authentic co-learning classroom (Sharan 2014; Webb, 2009). Diversified teachers' interpersonal behaviour and supportive communication are vital factors for supporting pupils' FtFPI to achieve socially responsive co-learning (Baines et al., 2008; Kristiansen, 2021). According to Sharan (2014), teachers require

relational knowledge associated with their role as facilitators in three activities. They need to: (a) model FtFPI skills in their practice, (b) teach them before pupils go into learning groups, and (c) continue developing the required skills at the same time they are teaching subject matter. Moreover, Webb and Mastergeorge (2003) suggest that teachers' practices in modelling helping behaviours are vital for pupils' effective help-related conduct during small CL group work. Accordingly, teachers provide specific assistance and communication focused on giving more positive affective messages to their pupils by encouraging them to facilitate each other's learning (Gillies, 2003; Kutnick & Berdondini, 2009). For example, teachers find something specific and positive about each group member's contribution to the group performance with the intention of encouraging pupils to reinforce one another's positive, prosocial behaviour (Van Ryzin et al., 2020). Moreover, previous research shows that teachers who promote pupils' interdependence, practise listening and encourage understanding for pupils' and each other's needs have an impact on pupils' willingness to seek and give more task-related help (Gillies, 2003).

Teachers act differently, influencing pupils' FtFPI through their methodological culture and competencies (Gillies & Boyle, 2010) and through social-psychological values on the personal and contextual levels (Filippou et al., 2021). However, teachers' preparation within CL is crucial for their role as active initiators and facilitators for FtFPI (Baines et al., 2008, Dzemidzic et al., 2019; Sharan, 2014). Monitoring is a prerequisite for the competency of providing support (Kaendler et al., 2015). Moreover, by observing how pupils exhibit various supportive behaviours during FtFPI situations and reflecting on their actions, teachers are equipped to consider the diversified prosocial behaviours needed for interactivity in their diverse classrooms (Johnson et al. 2013; Sharan, 2014). More precisely, teachers need competences in planning co-learning relationships, monitoring and intervening to consolidate the pupils' interaction when needed (Kaendler et al., 2015). Furthermore, carefully structuring group work and balancing pupils' status relationships is crucial for encouraging FtFPI processes (Cohen & Lotan, 2014). Teachers must design a group-worthy task that encourages each member's contribution, including the support groupmates offer one another to facilitate FtFPI (Lotan, 2003). They must also choose materials based on the academic and social objectives, determine group size, assign pupils to heterogeneous groups and allocate procedural roles, such as facilitator, timekeeper and recorder (Johnson et al., 2013).

While teachers have had positive experiences of pupils' CL practices, they have also experienced challenges in responding to pupils' socializing whilst also pointing out the need to pay greater attention to the elements that promote supportive relationships (Gillies & Boyle, 2010). Recent studies show insufficient supportive skills and prosocial behaviours among group members that influence their ability to cooperate and gain social competences to adapt to a complex FtFPI process (Le et al., 2018; Veldman et al., 2020).

CL researchers point out that to promote pupils' cooperation and supportive relationships, teachers themselves need to work cooperatively and engage in prosocial behaviours to enhance CL competence (Jolliffe, 2015; Van Ryzin et al., 2020). Otherwise, a lack of conceptual understanding of the five principles for effective cooperation and a lack of CL training in teacher education courses and other supports from schools have an effect on teachers' CL practices (Letina & Vasilj, 2021). Given that positive peer relationships can support more prosocial co-learning behaviour, Van Ryzin et al. (2020) highlight that CL should be a key component of teacher education and continuing professional development. Teachers' relational competencies of "sensitivity" and "responsivity" need to be explored more, as a lack of teacher relational competencies in implementing CL may seriously influence pupils' group work and negate the benefits of social interaction during co-learning (Aspelin, 2019; Le et al., 2018). Moreover, Rautanen and colleagues (2020) found that the teachers' work experience and working conditions, such as social support from colleagues and general workload, might impact their pupils' social support.

METHODOLOGY

The qualitative data from semi-structured interviews and video recordings have been taken from an exploratory case study in two purposively selected primary schools in Sarajevo (Yin, 2009). The study aims to understand and interpret the teachers' activities aimed at influence their pupils' engagement in FtFPI in CL group work from the teachers' perspectives and practices (Merriam & Tisdell, 2016).

Field and participants

The school district selected in this study (a large but socioeconomically underprivileged urban suburb in Sarajevo) has an ongoing interest in applying CL pedagogy within educational reforms that prioritise the quality of a student-centred

methodology (UNICEF, 2010). Coping with post-war consequences and societal changes that affect teaching and learning quality, these schools focus on CL activities to facilitate their pupils' mutual learning processes (Kristiansen, 2021). For such practices, Strategic Directions for the Development of Education in BiH, with the Implementation Plan 2008–2015, clearly state that a qualified and motivated teaching staff is a key factor in the implementation of the education reform. However, there is little qualitative evidence from research on teacher competencies and their abilities to cope with overwhelming demands and reform goals in BiH education (Branković et al., 2016). Otherwise, teachers' voices in decision making, defining reform priorities or regulating their profession are rarely heard (Rangelov-Jusovic, 2014).

The sample of two female teachers in Year 4 was selected due to their willingness to participate. They led the same class from Year 1 whilst their pupils were engaged in CL activities two to three times a week across various school subjects. They were involved in previous semi-structured interviews exploring their understanding of FtFPI aspects in CL, whilst their classrooms were purposefully selected for video recordings of pupils' FtFPI practices (Kristiansen, 2020, 2021). Consequently, the current study has utilised previously analysed interview findings and video excerpts associated with the teacher's roles and activities in relation to their pupils' FtFPI in CL to answer the article's research question. An integrated understanding of the teachers' perspectives and practices is motivated by linking conceptual FtFPI knowledge with its implementation, where teachers' beliefs, experiences and values might impact CL practices (Busch et al., 2017; Filippou et al., 2021).

Both teachers received training in child-centred pedagogies organised by UNICEF (2010), and studied CL in workshops provided by the independent Centre for Educational Initiative (COI) "Step by Step" and the Quality Teachers Matter project (2016). In this study, the teachers had no additional preparation aligning them with CL principles: positive interdependence, individual accountability, FtFPI, social skills and group processing (Johnson et al., 2013). T1[8] and T2 have 24 and 13 years of teaching experience. T1 has experience of presenting CL activities from her classroom practices at many seminars, workshops and regional conferences, and acts as a facilitator for other teachers.

8   T1 is a pseudonym (teacher from case school A).

Data collection

One-to-one semi-structured interviews were conducted with the teachers during autumn 2018. The interviews focused on how they understand FtFPI aspects associated with their support for pupils' CL practices (Kristiansen, 2020), and are combined with video recordings in this study. The video data provided details of the teachers' influence on pupils' FtFPI in group work, such as using/not using supportive actions and dialogues (Heath et al., 2010). Two selected classrooms served as the arena for video data collection in spring 2019, and excerpts (see Appendix B) from them are used in this study. Detailed information about the video-recording process, positioning of two cameras, heterogeneous small CL groups (N=4), type of group tasks and role of the researcher are described in the earlier study that focused on pupils' FtFPI practices (Kristiansen, 2021, p. 4–5). The field notes documented the teachers' activities in the "off-camera" context associated with teachers' interpersonal behaviour and supportive communication relevant to pupils' FtFPI, later incorporated into the transcripts of the video sessions.

Approval of the data collection processes was received from the Norwegian Social Science Data Service (NSD-Ref. 60754) and the Ministry of Education in BiH. The schools and the study participants gave their signed consents.

Data analysis

Teachers' views and practices supporting pupils' FtFPI were analysed using a hybrid approach of inductive and deductive thematic analysis as described in Kristiansen's studies (2020, 2021), which elaborate on detailed data analysis procedures. The findings have been selected from this for further micro-analysis and interpretation in the present study. Moreover, this study has used the adapted framework of teachers' competencies across implementation phases of CL group work (Kaendler et al., 2015) (see Appendix A) to analyse what they say and do to support pupils' FtFPI grounded in pre-defined FtFPI categories.

Accordingly, interpersonal behaviours and supportive communication combined with the teacher's role and preparation have been derived from the conceptual map representing teachers' views on pupils' FtFPI (Kristiansen, 2020, p. 5), also organised and added to Kaendler's (2015) theoretical framework. The teachers' approaches associated with FtFPI are summarised in a framework that the data analysis process uses to search for and identify activities in the pre-activity, inter-activity and post-activity phases of the CL group work (see Appendix A).

Transcribed video data of small group CL practices linked to pupils' FtFPI served as the coding and selection process for the micro-analysis of the video excerpts (Kristiansen, 2021, p. 6). Looking for teachers' activities across the three FtFPI phases in this study, the analysis was viewed as an iterative process where the researcher was required to carefully reread the transcripts while viewing the videos to select "key video clips" and add multimodal features from the data for the microanalysis (Bezemer & Mavers, 2011) (see Appendix C). Therefore, a unit of analysis was the video excerpts (N=9) that make the teachers' activities based on supporting FtFPI identifiable, and define the teachers' CL competencies (Kaendler et al., 2015). Seeking to understand the teachers' actions and views around their (non)supportive activities, the purpose of this analytical phase was to show pre-activity, inter-activity and post-activity FtFPI stages. Moreover, the analytical strategy focused on the teachers' verbal and non-verbal actions using line numbers to help identify the location of these selected segments. The microanalysis focused on the teacher' activities, such as brief check-in, whether they act pro-socially, act (non)verbally, if they were (non)engaged or otherwise shaped the FtFPI process across the three phases.

The Bosnian primary-school English teacher translated all the interviews and video transcriptions from Bosnian into English while reviewing the concurrence between the video and audio clips and their transcripts. During the member-checking process (Creswell & Creswell, 2017), this teacher served as a collaborative partner for discussing the empirical data and justifying their interpretations (Klette & Blikstad-Balas, 2018).

FINDINGS

This section reports the teachers' perceptions and practices that refer to the three activity phases when supporting pupils' FtFPI in small CL group work. Categorising teachers' activities (see Appendix A) into pre-activity, inter-activity, and post-activity FtFPI phases, the interview findings and the video excerpts (N=9) below portray what teachers say and do to influence pupils' FtFPI.

Pre-activity phase

Referring to this phase, the teachers underline the importance of preparing their pupils for FtFPI. They talked about:

> … their communication, closeness, empathy and interaction. (T2)

… the type of skills for learning to help someone else. (T1)

Planning the joint task to engage pupils in FtFPI is acknowledged as a crucial step:

If you don't choose the tasks properly, adapt them to the pupils' age and their pre-knowledge, the work will of course be difficult. (T2)

Excerpt 1 is an example of how a teacher gives instructions for FtFPI to stimulate pupils' openness and supportiveness before working together.

Excerpt 1
1. Teacher: "When we work on mathematics together, it's important to talk and think together… to be persistent… to try and try, and not give up…"

[…]

4. Teacher: "Compare results… Check… You can approach those who don't know and explain the procedure to each other."

[…]

7. Teacher: "You shouldn't hide your assignments; they should be open in the group… Who doesn't know… should ask."

Additionally, to involve her pupils in FtFPI, the other teacher assigns helping points, as demonstrated in Excerpt 2. However, the use of these resources was not clear to all.

Excerpt 2
1. Teacher: …if you get into trouble, you have the right to ask for a "quisko." (something like bonus points)
2. A pupil asks: "Should we work as a team?"
3. Teacher: "Yes, definitely as a team… you have to help each other… you use your points for help."
4. A pupil asks: "And how many points do we have?"
5. Teacher: "Three points."
6. Someone: "Is that all?"
7. Teacher: "I think you only need them for these last tasks."

Inter-activity phase

The findings in this section refer to the teachers' monitoring, supporting and consolidating activities in the pupils' FtFPI in their CL group work associated with interpersonal behaviour and supportive communication.

Monitoring

Both teachers emphasise the importance of monitoring FtFPI situations and the benefits from them:

> *I can see how much individual children have learned about group work, inter-peer support at a younger age… if we fail to develop this in them now, it'll be very difficult to change this when they become adults. (T2)*

> *I'm most satisfied when I often hear them commending someone. They eagerly encourage someone who needs encouragement…(T1)*

The teachers moved between the groups and noted situations associated with FtFPI.

Excerpt 3 below demonstrates that the teacher sees from MLAg's[9] facial expression that something is wrong in the group. Although the pupil tries to hide it, the teacher perceives difficulties and asks MLAg about her work. However, MLAg does not reveal their problems to the teacher, even though MLAb confirmed there were problems after the teacher had moved on.

Excerpt 3

1. MLAg' s facial expression says something is wrong
[…]
5. Teacher approaches the group: "Is everything all right?"
6. MLAb looking straight ahead: "No!"
7. HLAg quickly: "Yes!"
8. Teacher: "Why?"
9. MLAb looking at the teacher and smiling: "Yes, yes! Well, I want to say yes"
[…]

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9   Each pupil in the group has been numbered, for example: MLAg pupil, girl with mid-level achievement, HLAg pupil, girl with high-level achievement and so forth (see Kristiansen, 2021).

12. Teacher addresses the group, but directing her gaze at MLAg: "Are you managing?"
13. MLAg (quietly): "Yes!"
[...]
17. Teacher leaves
18. MLAb: "Nothing's okay!"

Excerpt 4 illustrates that the teacher pays attention to the groupmates' efforts to acknowledge help-related peers' behaviours. A positive example is praised and shared with the rest of the class, while those not as cooperative are given explicit advice, particularly the pupil who was not willing to accept help. Moreover, the teacher informs the pupils about each other's help.

Excerpt 4
1. Teacher approaches the group: "Did you manage to explain it to D.?"
2. MLAg: "Yes!"
[...]
62. Teacher: "This team here… I can see they don't have any problems for now… Here (M.)… hats off. Applause for M., she's made a great effort." (everyone applauds)
63. Teacher approaches the second group: "I can see all three of you around D… but I don't see that D. is taking this seriously and I would like him to take this a bit more seriously."
[...]
70. HLAg: "Teacher, can you explain this to us?"
71. Teacher: "Does anyone on the team know?"
72. MLAg: "I do…"

Supporting
The teachers mentioned that the supportive activities aimed at the pupils' inter-personal behaviour and communication were not consistent in the group work:

> *… if I interfere at a particular moment, the group will come back at that moment, but the aforementioned will happen again… I praise and criticise them that way (T2)*

…on their communication, their patience, listening… there were different situations… (T1)

The findings in Excerpts 5 and 6 reveal that the teacher's (dis)encouragement can influence the pupils' further flow in the group work.

Excerpt 5
1. HLAg looks at MLAg: "Just write down… write what you're thinking, don't ask me!"
2. Teacher approaches, puts her hand on HLAg's shoulder, lowers down to eye level: "Without any nervousness, please. Is that right?"
[…]
5. Teacher continues: "Each of you is to write his or her part. If he or she doesn't have any idea, …pass it along further and there are no problems."
[…]
7. Teacher lowered herself again to HLAg's eye level: "We're not competing… just in a relaxed manner." (then leaves the group).

This teacher encourages and advises pupils in the group by supporting their positive learning engagement. In particular, the teacher encourages the HLAg by stopping her non-cooperative behaviour through body language.

However, Excerpt 6 shows how a teacher acts in the opposite way, being non-supportive and comparing the group's work with others.

Excerpt 6
1. HLAg: "Teacher… We can't write the text!"
2. Teacher: "How come you can't write it? V.'s group has written it."
3. MLAb: "How?"
[…]
5. Teacher lowers herself to the desk: "Here… Is this something we're doing for the first time today, N.?" (looks at HLAg)

Consolidating
Teachers found it important to improve the FtFPI process so that the pupils could analyse it:

…the presentation should be improved, and everyone should have the opportunity to say something about the work… I always notice that they're the best pupil exhibitors. (T2)

So, when we notice this is not developing in a desirable direction, we stop everything and talk about it… why someone has opted to disrespect something at a certain point. (T1)

Excerpts 7 and 7.1. from two groups within the same group session are examples of how the teacher guides group presentations allowing the pupils to ask questions about the group's work process without elaborating on FtFPI aspects.

Excerpt 7

1. Teacher: "Yes, your examples are excellent."
[…]
5. A pupil from the class: "How did you organise yourselves in the group?"
6. HLAg turns to MLAb: "Will you? What did you do?"
[…]
12. Teacher: "So, you agreed on that. That's nice to hear."
13. Another pupil: "What was the working atmosphere like?"
[…]
17. Teacher adds: "You experimented a bit."
18. HLAg: "It was very interesting! Oh, we joked a bit."
[…]
31. Teacher: "Thanks to the group." (applause).

Excerpt 7.1.

1. Teacher: "It's important for us to see what your research on juices has shown."
[…]
12. Teacher: "Do we have any questions for the group?"
13. A pupil from the class: "How did you share the work; who did what?"
[…]
17. HLAg: "Let me just add that at the end, when they found all that, N. and T. helped me with the writing of conclusions" (points at them).
18. Teacher: "Thank you team." (applause)

Post-activity phase

Reflecting

Both teachers added that self-assessment and peer-assessment might be taken a step further towards supporting shared FtFPI success:

> *I often do my self-assessment at the end of teaching the subject matter and I do it with my pupils. (T2)*

> *That constant, everyday reflection, a re-examination of what I did well that day and what I did not… I first had to define myself somehow, what kind of a person I am and what my priorities are… (T1)*

The teachers reflected on their cooperation with others:

> *Why should you wait for something to come to the surface, something that's good? Why not notice the first step? (T2)*

> *…I talked about examples from my positive practice and life in my class… and tried to convey that to them and it was very well accepted. So, I too build my self-confidence somewhat. (T1)*

> *Excerpts 8 and 9 illustrate an example of group-work reflection incentivized by the teacher that might influence pupils' FtFPI behaviour. Excerpt 8 shows the pupils' updating new support suggestions.*

Excerpt 8

1. Teacher: "We have the opportunity for reflection."
[…]
3. MLAg: "We need to make a table like we did before."
[…]
6. HLAb: "Does anyone have another rule to add? The ones we have here are 'listen while others speak', 'no arguing', 'work hard'."
7. MLAg: "What do you think? Because these rules are somehow… school rules. Maybe some have to… for example, have to be more for a group support."

Excerpt 9 shows support and reflection based on what the teacher observed earlier. The teacher recalls MLAb's achievement while supporting him to share the result with others in the group, simultaneously influencing his status among his peers. Reflecting on pupils' behaviours that impeded their group achievement, the teacher reflected on their efforts to solve the new task not previously taught.

Excerpt 9
7. Teacher comes closer and calls to MLAb to repeat the result.
8. MLAb: "26"
9. Teacher pats MLAb's head: "Let's listen to the mathematician."
10. HLAg: "Bravo V."
11. MLAg: "You're a real mathematician…"
[…]
31. Teacher: "You shouldn't be sad at all. It's very difficult to divide a three-digit number because it's something you haven't learned as yet. I had to let you try. You worked hard and I really appreciate your attempt. The mathematics requires patience and persistence… Bravo, bravo…"
[…]
34. Teacher approaches the group and points at MLAb: "Bravo for V. He managed to solve your mathematical problem. Bravo!" (teacher walks away from the group).
35. MLAg starts to applaud.
36. HLAg and LLAb join in, and then the applause can be heard coming from the whole class.

DISCUSSION
This study aims to investigate which activities teachers use to support pupils' FtFPI within CL groups. Analysing video data and interviews with teachers, the study answers the research question referring to which socio-pedagogical role is crucial for teachers in developing socially responsive CL classrooms (Baines et al., 2008; Sharan, 2014). Hence, this study attempts to provide rich details on teachers' understandings and practices of FtFPI in CL that might influence the quality of the pupils' socially responsive behaviours, thus bridging the prosocial relational gap between (less)supportive pupils (Le et al., 2018; Veldman et al., 2020). Accordingly, teachers' support may enable the groups to progress within their ZPD towards a higher level of mastery, thereby becoming more

capable FtFPI co-learners (Kristiansen, 2021; Vygotsky, 1978). Although the teachers' impact through three FtFPI phases in CL is interrelated, they will be discussed separately, in the following sections as pre-activities, inter-activities and post-activities.

Planning for FtFPI pre-activities

Both teachers show a crucial understanding of FtFPI when it comes to supportive behaviour and communication, including perceiving the need to prepare their pupils accordingly. To achieve this, the teachers acknowledge that careful joint task planning is required to engage pupils in the FtFPI situation (Lotan, 2003). Moreover, the teachers need to plan the pupils' joint problem-solving so it is connected to their pro-social practices, building on mutual support, trust and communication according to an understanding of socio-emotional learning experiences (Kutnick & Berdondini, 2009). Consequently, the teachers are resources for stimulating their pupils' interpersonal and communication skills for co-learning and future co-work competencies (Gillies, 2003; OECD, 2019). However, Excerpts 1–2 reveal that the teachers use diverse, stimulating FtFPI instructions that may affect pupils' openness and willingness to support each other and influence their social interdependency (Deutsch, 1949). While Excerpt 1 shows that the teacher supports the pupils' mutual responsivity in FtFPI situations, Excerpt 2 indicates that introducing "helping points" may foster extrinsic and more limiting motivations than intrinsic motivations in giving mutual support. Consequently, stimulating such supportive relationships may influence pupils' attempts for joint achievement and well-being where each pupil recognises their success as support for others (Johnson et al., 2013). This supportive approach by the teachers, as seen in Excerpt 2, cannot guarantee that pupils will show the proper conduct to develop and sustain their cooperative and particularly supportive skills (Colomer et al., 2021).

Influencing FtFPI inter-activities

The teachers see monitoring, supporting and consolidating the groups' work as essential and beneficial activities in influencing all pupils' FtFPI engagement towards long-term individual and co-learning success, but these are very challenging activities in their practices. From the video analysis (Excerpts 3–4), it is clear that the teachers are focused on their pupils' FtFPI difficulties as they attempt to detect potential FtFPI consolidation. However, the pupils do not

elaborate on FtFPI difficulties or facilitation in the group presentations, as demonstrated in Excerpts 7–7.1 about how they help each other, e.g. in writing a conclusion. Moreover, the teachers state that they are not satisfied with their support on consolidating the pupils' interpersonal behaviours and communication, as this requires more relational knowledge for teachers as supportive facilitators (Sharan, 2014). This finding is consistent with previous empirical results reporting that cooperative work is often perceived as challenging by teachers as their socio-pedagogical role requires adequate training and knowledge, careful planning, monitoring, and reflection on promotive interactions (Buch et al., 2017; Gillies & Boyle, 2010; Webb, 2009). The video evidence here also showed some positive examples of the teacher as a role model who serves as the foundation for other pupils' supportive behaviours, e.g. Excerpt 4 shows how the teacher praises groupmates' efforts to help. In Excerpt 5, the teacher models caring relationships between groupmates by encouraging HLAg verbally and nonverbally while advising on CL conduct according to prosocial behaviour (Van Ryzin et al., 2020), but not in Excerpt 6. This leads to the question of whether the teacher is using the CL principles correctly in developing a social pedagogy of classroom group work (Baines et al., 2008).

Reflecting on FtFPI post-activities

The teachers view self-reflection as a vital activity for knowing their role in improving FtFPI, including reflection on cooperation with others. As the teachers said in the interviews, reflecting on the cooperation through colleagues' acknowledgment helps to build self-confidence, support their CL work, and as Rautanen et al. (2020) found, give their pupils' social support. Accordingly, while teachers' responsivity (Aspelin, 2019) plays a pivotal role in influencing pupils' FtFPI practice and their support for each other' s learning, the collaborative school culture impacts the support among teachers (Jolliffe, 2015).

Reflecting on pupils' behaviours, as in Excerpts 8 and 9, the teachers conduct an orientation session in which their pupils are invited to examine or are reminded of their cooperative roles while balancing equal status between pupils (Cohen & Lotan, 2014). Concerning the pupils' reflections on their group-work process, the teachers' activities through the FtFPI phases show that they involve pupils, but it seems, with less assessment of the FtFPI process. This concurs with earlier research that revealed that teachers dominantly guide pupils to reflect on their group product rather than the cooperative process itself (Le et al., 2018).

CONCLUSION AND IMPLICATIONS

The current study aimed to investigate the teachers' supportive activities for pupils' FtFPI in CL in the context of BiH, which were analysed through the modified framework of teachers' CL competencies (Kaendler et al., 2015). Although the interview evidence shows that teachers emphasise diverse activities that promote pupils' FtFPI, particularly when it comes to supportive behaviour and communication aspects, their support has challenges. Moreover, the video excerpts indicate that they lack a conceptual approach through the three-phase FtFPI activities dictated by their specific socio-pedagogical role in group work (Baines et al., 2008; Kristiansen, 2020). While positive examples show the pro-social relational support that consolidates the pupils' FtFPI work, other, less supportive approaches require a reconsideration of the teacher's role in incorporating the five principles of CL (Johnson et al., 2013; Van Ryzin et al., 2020). Empowering teachers' facilitation skills through a specific set of capabilities pointed out in the study's findings may support teachers in practising these FtFPI approaches, which are likely to improve the quality of pupils' FtFPI promotion. Thus, three-phase FtFPI should be trained in teacher education and schoolteachers' in-service programmes (Letina & Vasilj, 2021). This exploratory and interpretive study is limited by the short time span of the data collection and the sample having only two teachers, but can be extended in longitudinal and comparative approaches. Further research could elaborate on experientially diverse teachers' FtFPI pro-socially pedagogical resources across different contexts, an important issue in teachers' socio-relational competencies for CL sustainability in diverse classrooms (Colomer et al., 2021; Van Ryzin et al., 2020).

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Appendix A

Table 3.1   Clarification of teachers' supportive FtFPI activities adapted from the theoretical framework for their CL competencies (Kaendler et al., 2015).

FtFPI through three phases	Activities	Descriptions concur with CL researchers' perspectives (Cohen & Lotan, 2014; Kristiansen, 2020, 2021; Gillies, 2003; Johnson et al., 2013)
Pre-activity phase	Planning	Giving the task instructions, including FtFPI settings, to pupils before they start working in groups Assigning different but specific roles or responsibilities to group members and resources to stimulate FtFPI
Inter-activity phase related to interpersonal behaviours and supportive communications dimensions	Monitoring	Observing if pupils are actively engaged in FtFPI Paying attention to pupils' behavioural and communication features Discovering difficulties and solution processes between mixed-ability pupils (e.g. high-ability and low-ability pupils)
	Supporting	Giving encouragement and praise during pupils' FtFPI Giving advice and asking FtFPI-related questions
	Consolidating	Group work ends with a plenary session where pupils present accomplished task and FtFPI process across various groups (e.g. group presentation) Pupils detect their own FtFPI gaps Teachers ask about supportive and interfering features that occurred during FtFPI
Post-activity phase	Reflecting	Self-reflection refers to considering and describing teachers' own behaviour Reflecting on behaviours that impede or enable group work Teachers recall what they observed during monitoring

Appendix B

Table 3.2   Excerpts from video sessions related to pupils' group assignments.

Year 2019	Code	Excerpt	Videos (min)	School-subject	Task	Purpose
15 April	SA-G1-S2	8	00:04-0:29	"Teams of Friends"– consolidation activity	Work rules	Weekly group discussion about mutual work and support
16 April	SA-G1-S1 SA-G2-S1.1. SA-G1-S1.1.	3 7 7.1	03:47–04:03 02:13–05:28 01:27–04:07	Science	Harmfulness of sugar in juices	Research work Presentation
17 April	SA-G1-S3	9	05:46–06:15	Mathematics	Division of a three-digit number by a single-digit number	Work on a new lesson
18 April	SA-G2-S1	5	01:44–02:16	Bosnian language	Item description	Preparation for the written exercise
19 April	SA-G1-S1 SA-G2-S1	1 4	11:27–18:20 11:27–18:26	Mathematics	Division of a three-digit number by a single-digit number	Exercise
25 April	SB-G1-S2	6	02:09–02:25	Mathematics	Multiplication of a three-digit number by a single-digit number	Revision
26 April	SB-G1-S1	2	(0:0–0:17).	Mathematics	Multiplication of a three-digit number by a single-digit number with transition	Exercise

Appendix C

Transcription key

[...] excluded part of dialogue
(.) silence, about 1 sec
(...) silence, about 2 sec
! rising intonation
(D.) (saying pupil's first name)