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Exploring pupils' and teachers' perspectives on face-to-face promotive interaction in cooperative learning

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ABSTRACT

This study reports on pupils' and teachers' perceptions of face-to-face promotive interaction (FtFPI) in cooperative learning (CL) at two primary schools in post-war Bosnia and Herzegovina (BiH). Using mixed methods, the study asks (1) 'To what extent are the aspects of FtFPI most likely to influence pupils' CL group work?' (2) 'What are the challenges in applying pupils' FtFPI in small CL groups?' The findings reveal mostly positive beliefs of FtFPI influence on small CL group work. However, when it comes to pupils' and teachers' experiences, several challenges have been identified: (1) organisation of FtFPI, (2) planning and balancing between working on a group task and supporting peers, (3) interpersonal behaviours, and (4) supportive communication. The findings suggest that more classroom research related to peers' promotive interpersonal behaviour and supportive communication is needed.

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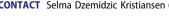
KEYWORDS

Face-to-face promotive interaction; cooperative learning; pupils' cooperation; peer support

1. Introduction

Research has shown that pupils' performance in small learning groups depends on the quality of group interaction (Webb 1982). Moreover, it is important for group learning that pupils are friendly, helpful and cooperative (Dzemidzic Kristiansen, Burner, and Johnsen 2019; Battistich, Solomon, and Delucchi 1993). As a pedagogical model, cooperative learning (CL) builds on interaction and cooperation between pupils supporting each other's learning and promotes their prosocial behaviour (Cohen 1994). However, even though pupils sit together in heterogeneous groups in most elementary schools, they do not necessarily work together but for various reasons solve the learning tasks individually (Baines, Blatchford, and Webster 2015). Group learning does not necessarily involve high-quality interaction and mutual support in mastering joint learning tasks (Huber and Huber 2008). Moreover, it is challenging for teachers to plan, monitor and support peer interaction in small group work settings (Kaendler et al. 2015). Placing pupils together in small groups does not seem to be enough to develop cooperation.

This article focuses on pupils' face-to-face promotive interaction (FtFPI), which together with positive interdependence, individual accountability, social skills and group processing contributes to successful CL (Johnson and Johnson 1999). The FtFPI as a type of social interaction refers to participation in and contribution to group work among pupils while they are supporting, encouraging and praising each other's efforts to accomplish their joint task (Johnson and Johnson 1999).





Cooperative learning and FtFPI are seen as socio-cultural resources and mediating tools where the learning activities involve sharing knowledge and support in the social interaction of the group (Mercer and Howe 2012). Vygotsky (1978) points to the significance of peer interaction, asserting that what happens (e.g. dialogues, actions and activities) in the social environment helps pupils to learn and develop. This is a joint interactive process with more capable and cooperative peers moving the group beyond their current 'zone of proximal development' towards a higher level of mastery (Vygotsky 1978, 86). Thus, pupils apply their cultural resources, such as knowledge, beliefs and values, through 'social mediation' in facilitating peer learning as a joint activity (Moll 2014, 31).

Enhancing FtFPI in the early years of children's education is crucial for later development of their capacity to cooperate successfully (Ferguson-Patrick 2018). This includes using interpersonal abilities to communicate and give support effectively, but also planning and organising pupils' joint work more independently of the teacher (Gillies and Haynes 2011). Whilst pupils' understanding of the social processes within CL is important (Mary 2014), Dzemidzic Kristiansen, Burner, and Johnsen (2019) call for deeper insights into the FtFPI process by exploring pupils' and teachers' personal experiences.

Shedding light on pupils' and teachers' perceptions on FtFPI in CL groups at two primary schools in Bosnia and Herzegovina (BiH), this article asks:

- (1) To what extent are the aspects of FtFPI most likely to influence pupils' CL group work?
- (2) What are the challenges in applying pupils' FtFPI in small CL groups from the pupils' and teachers' perspectives?

The study will provide an understanding of pupils' and teachers' perspectives on aspects of FtFPI in small CL groups, including recognition and experience of such values as support, encouragement, respect and praise. Hammond et al. (2010) reported that pupils valued these social aspects of working with peers, but that they were less likely to agree that cooperation helped them to perform better in the assessed tasks. Accordingly, this study investigates the influences and challenges of FtFPI aspects of pupil cooperation in the context of small CL groups.

2. Face-to-face promotive interaction (FtFPI) for pupils' cooperation

Cooperative learning refers to framing pupils' positive interdependence and promotive interaction (Jolliffe 2015). Moreover, the quality of pupils' interactions in CL mostly relates to the readiness to cooperate, peer acceptance and one's own responsibility for learning (Buljubašić Kuzmanović 2009). Most pupils and teachers appreciate that supportive relationships are essential for the promotion of learning (Kutnick and Kington 2005). However, pupils' FtFPI differs through the individual's participation and contributions according to the degree to which the needs and motives are aligned between the pupils (Premo et al. 2018). Thus, FtFPI has to be considered within the context of group members encouraging and motivating each other to increase effort and support in their learning process (Pai, Sears, and Maeda 2015).

This may include several dimensions, such as peer encouragement, respect, paying attention and peer praise (Kagan and Kagan 2009). Moreover, when aiming to develop successful cooperation, the pupils might focus their attention on learning processes instead of only caring for the production of a group result (Huber and Huber 2008).

Thus, pupils have to be prepared to work cooperatively while also providing more help to each other and understanding each other's needs (Gillies and Ashman 1998). However, this requires carefully structured FtFPI for academic and social gains (Sharan 2010). Moreover, the five aspects of FtFPI have the potential to increase the pupils' success in CL: (1) pupils' interpersonal behaviour, (2) providing pupils' experiences in FtFPI processes, (3) interrelated communication and support, (4)

teachers' influence which all, in turn, (5) improve the pupils' cooperation (Dzemidzic Kristiansen, Burner, and Johnsen 2019).

In many countries, CL is not widely and successfully used (Ferguson-Patrick 2018). There is little understanding of how to put it into practice (Jolliffe 2015) due to low-quality peer interaction (Baines, Blatchford, and Webster 2015). Moreover, using pupils as an important resource for peer learning remains an untapped resource in many cases (Riese, Samara, and Lillejord 2012). Thus, both teachers and researchers are looking for ways to enhance pupils' involvement in their learning and to refine their interactivity (Woods-McConney, Wosnitza, and Sturrock 2016). One way is to listen to what pupils have to say about their experiences in school, particularly in all matters directly affecting them (Warner 2010).

2.1. The teacher's role when influencing pupils' FtFPI

When it comes to carefully structuring lessons to facilitate and encourage group processes (Kaendler et al. 2015), the role of the teacher is crucial (Sharan 2010). Teachers must have a clearer view of what works and does not work when they are preparing pupils for their promotive interaction (Mercer and Howe 2012). Thus, teachers need to encourage pupils to be more helpful and facilitate each other's learning by using more behaviour that encourages learning (Gillies 2003). To accomplish this, Webb, Farivar, and Mastergeorge (2002) found that teachers have to promote interdependence and pupils' willingness to help each other. Moreover, when teachers prepare pupils to practise listening to each other and understanding the perspectives of others, this may lead to responsive peers who in turn give more task-related help to each other (Gillies and Ashman 1998). Finally, teachers have to become aware of the fact that grading may influence the quality of the pupils' interaction (Hayek et al. 2017).

Whilst teachers act differently according to their values and their contexts when applying the new teaching method (Pescarmona 2011), they need more professional support to improve ability to cope with the challenges (Dzaferagić-Franca and Tomić 2012). Teachers' and pupils' mutual understanding of the particular aspects of their practice, such as pupil-pupil interaction, is without a doubt crucial for successful implementation of CL (Iliško, Ignatjeva, and Mičule 2010).

3. Methodology

Convergent mixed methods were used in an exploratory case study of two primary schools in BiH (Creswell and Creswell 2017). Questionnaires were used to investigate pupils' perceptions of different aspects of FtFPI, whilst semi-structured interviews were conducted to gain insights into pupils' and teachers' experiences of FtFPI. Data were collected in parallel, analysed separately and then the results were merged and compared (Creswell and Creswell 2017). Thus, the use of mixed methods provided a better understanding of the research problem than would have been accomplished if only questionnaires or interviews had been used. This also minimised the limitations of both approaches (Creswell 2014).

3.1. Context and participants

Education in post-war BiH is highly complex and fragmented, which leads to challenges when trying to implement educational reforms (Clark 2010). In the attempt to improve the quality of education in BiH (Tikly 2011), priority has been given to synchronising this work with contemporary European teaching and learning models (Framework Law on Primary and Secondary Education in BiH 2003).

Pupil-centred learning, as adopted by the Global Campaign for Education (2002), has served as the framework for implementing the concept of Child-Friendly Schools (CFS) initiated in 2002 by UNICEF. For this reason, 97% of lower primary school teachers had received basic or advanced pupil-centred methodology training (UNICEF 2010). The Centre for Educational Initiatives 'Step by Step' NGO in Sarajevo provided the training. One of the aims was the teacher's preparation for a pupil-centred approach to teaching and learning and a CL model. However, as educational reforms evolve slowly, active learning methods, development of cooperation and scientifically based data on pupil learning are still lacking in BiH schooling (Brankovic et al. 2016).

Schools in Sarajevo were purposively selected (Creswell 2014) for the study. Classroom teachers were trained in child methodology as part of their professional development, including how to establish small CL groups in their classrooms (UNICEF 2010). In these schools, pupils have been involved in CL experiences two to three times a week across core subject areas (Bosnian language, Science and Mathematics). The sample consisted of two year 4 and two year 5 classes (N=192) in primary school A (48.4% of the pupils) and in primary school B (51.6% of the pupils), and four year 4 class teachers. The teachers were all female; two each in primary schools A and B displayed positive attitudes towards cooperative group work activities and were interested in participating in this research project. All four were qualified teachers (four-year Bachelor's degree), fulfilling the formal standards set by the BiH government, while two of them (T2A and T2B)¹ had a Master's degree in primary education. Three of the teachers (T1A, T1B, T2B) had respectively 24, 13 and 12 years of teaching experience, while the one in school A (T2A) had around five years of teaching experience.

3.2. Data collection

The data collection, carried out in the autumn of 2018, focused on certain aspects of FtFPI. The intention of the questionnaire was to examine the 'current pupils' opinions on issues and practices and their actual behaviours (Creswell 2014, 403) related to FtFPI in CL in all eight classes with pupils ranging from 9 to 11 years of age. Since it was the first time the pupils experienced this type of written guestionnaire, the researcher explained the rating system and the meaning of each item. The questionnaire, given during one school class (approx. 40 minutes), used a five-point Likerttype scale consisting of ten items. The questionnaire was translated into Bosnian by the researcher and reviewed by professionals in the field. To eliminate ambiguous items, the questionnaire was piloted in another school. The items are based on the definition of FtFPI established by Johnson and Johnson (1999) and on the reviewed literature. The Cronbach's Alpha value of the questionnaire used in the present study was 0.79, indicating an overall high reliability, meaning that the scale items are closely related as a construct (pupils' FtFPI).

The second part of the data collection comprised semi-structured interviews conducted with 16 pupils in year 4 from schools A and B. The purpose was to gain a deeper understanding of the pupils' perceptions relating to key aspects of FtFPI. The interview guide had a list of topics to cover the items given in the pupils' questionnaire. All selected pupils have been in the same class from year 1 and were chosen by their teacher according to their grades in the class's protocol (two high, four medium and two low levels of achievement). All interviews, lasting between 15 and 45 minutes and taperecorded for later transcription and analysis, were conducted in the pupils' and teachers' mother tongue, Bosnian. The transcriptions were later translated into English.

Prior to the data collection process, the researcher addressed practical and ethical issues, such as acquiring informed consent from the pupils, school administrators, teachers and parents.

3.3. Data analysis

Descriptive statistics were used for the quantitative data and frequency counts were tabulated for each of the items in the questionnaire.

Through a 'hybrid' approach of inductive and deductive thematic analysis (Fereday and Muir-Cochrane 2006), the interview analysis started with pre-defined categories derived from the modified framework model of the FtFPI aspects (Dzemidzic Kristiansen, Burner, and Johnsen 2019), and then subcategories, such as themes emerging from the participants' responses, were added to them. Emerging themes were refined, compared and organised to form the subcategories

Table 1. Concept map showing the main categories and subcategories of the modified FtFPI aspects model (Dzemidzic Kristiansen, Burner, and Johnsen 2019).

Challenges and possible ways of improvement							
Categories	Subcategories						
Interpersonal behaviour	Helping behaviours	Helpin	g strategies				
Student's experiences and process	Organisation	Individual aspects	Environmental aspects				
Communication and support	The four dimensions of F	tFPI					
Deeper knowledge and learning	Teacher's role	Preparation					

so that similar data were give similar conceptual labels (Strauss and Corbin 1990). Finally, a concept map was then developed (Creswell 2014) (see Table 1) to represent the four main categories associated with the pupils' and teachers' perceptions: (1) Interpersonal behaviour, (2) Pupils' FtFPI experiences and process, (3) Communication and support, and (4) Improving knowledge and deeper learning about FtFPI.

4. Findings

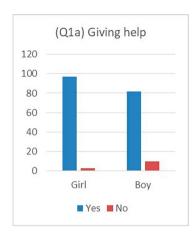
The material below has been organised into two main sections. First, pupils' answers to the questionnaire (n = 192) provide an overview of the most important aspects of FtFPI influencing the CL process. The structure of the questionnaire and the organisation of the statistical findings have been inspired by Burner's article (Burner 2015). Second, qualitative in-depth descriptions of each item grouped around the four main categories (see Appendix 1) give insights into the pupils' (n =16) and teachers' (n = 4) understanding of FtFPI aspects in small CL.

4.1. Statistical findings

The items were organised into five groups in order to present the pupils' ratings of the influence of FtFPI aspects on the small CL group-work process. They are: (1) the effectiveness of CL group work (Q1-Q3), (2) giving and asking for help (Q4-Q5), (3) pupils' attention focused on each other (Q6-Q7), (4) pupils' encouragement and praising (Q8-Q9) and (5) the teacher's role (Q10). Table A1 (see Appendix 1) indicates the mean averages of responses regarding the degree to which the pupils said the aspects influenced their CL process. It includes a percentage overview so the nuances can be seen in the following.

Sixty-seven per cent of the pupils reported to a great or very great extent that group work (Q2) and support from their peers (Q3) give them a better learning outcome. However, half of the pupils stated that they often did not learn in their group work (Q1) where the mean score was the lowest compared to the other nine questions (M=3.49). Sixty-seven per cent of the pupils said that asking for and giving help to their peers improved their group work to a great or very great extent (Q4-Q5). However, 36% of the pupils reported that paying attention to peers (Q7) improved their group work, ranging between very little and to some extent, and in particular only 18% stated that they listened attentively to peers (Q6). Nonetheless, 78% of the pupils indicated to a great or very great extent that encouragement (Q8) and praising (Q9) from peers improved their group work. Moreover, 91% of the pupils answered to a great or very great extent that their teacher taught them how to give good support to peers (Q10), where the mean score was the highest (M = 4.56).

The part of the questionnaire with statements that the pupils responded to with either yes or no presented differences in their experiences of FtFPI in CL group work (Q1a-Q9a) and their beliefs about how it could improve group work (Q1b-Q9b) (see Table A2 in Appendix 2). The number of pupils who expressed this was almost equal when comparing both gender and grade; those showing differences are displayed in the graphs. Ninety-three per cent of the pupils reported that they gave help to their peers in group work (Q1a), 88% stated that they received help from their peers (Q2a) and 86% believed that they worked well when receiving peers' help (Q2b). However,



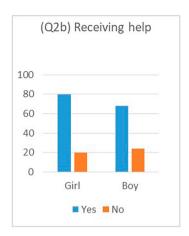
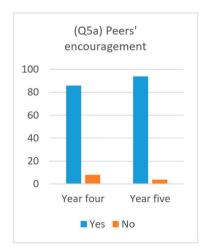


Figure 1. Giving and receiving help.

17% of the pupils did not feel that they worked well when giving help to peers (Q1b). Girls gave more help to peers and more girls than boys believed that they worked better when receiving help from peers (see Figure 1).

Regarding peers paying attention in group work, 27% of the pupils said this was not their experience (Q3a) and 23% answered that their peers did not listen to them attentively (Q4a). More than one-third of the pupils (34%) did not believe that paying attention to peers improved their group work (Q3b). The most important aspects that pupils believed could contribute to working better in groups were peers' encouragement (85%) (Q5b), peers' praise (Q6b) and knowing how to help peers (Q7b) (83%). Finally, 23% of the pupils did not experience peers' encouragement (Q5a) and 20% did not receive peers' praise (Q6a). Year five pupils had slightly more peer encouragement than Year 4 pupils, whilst girls were more likely to encourage peers than boys were (see Figure 2).

A total of 83% of the pupils reported that they might work better when knowing how to help peers (Q7b), whilst 19% did not know how to encourage peers (Q8a). Girls knew better how to help and especially encourage peers compared to boys. Year 4 pupils believed more that knowing how to encourage peers improved group work (see Figure 3).



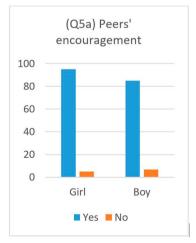
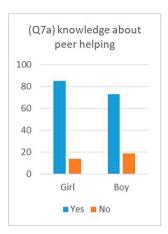
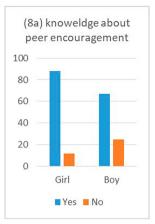


Figure 2. Peers' encouragement.





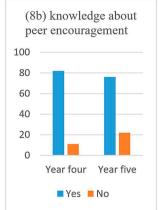


Figure 3. Sufficient knowledge about peer encouragement.

Almost all pupils (94%) reported that their teachers taught them how to support their peers (Q9a) and thought this helped them to work better in groups (9b).

In sum, based on the quantitative results, pupils were mostly positive about the FtFPI aspects, even though they did not work often in CL groups. The pupils recognised the teachers' role as the most important aspect of supporting their FtFPI. However, a considerable number of pupils had insufficient knowledge on how to encourage, praise or pay attention to their peers in group work.

4.2. Qualitative findings

This section reports on the findings from the interviews conducted with pupils and teachers. They shared their understanding of FtFPI aspects and the challenges when using FtFPI in small CL group work.

4.2.1. Interpersonal behaviour

In describing pupils' interpersonal behaviour in relation to helping behaviour for those who give and receive assistance, the teachers and pupils emphasised the need to recognise and understand each other's academic and socio-emotional needs:

Their facial expression shows they're confused, they're intensely thinking about something. (SB-HLA2-Girl)²

I noticed that some pupils are proud if they take care of their peers, help them. (SB-T1)³

When considering how helping behaviour might encounter interfering factors, the interviewees reflected on the level of pupils' cooperation that enables such support, for example:

I want to help, but he's not interested. (SA-MLA3-Girl)

I mention the passive observers, withdrawn and shy \dots they leave their work to the one most open pupil \dots (SB-T2)

In many cases, the helping strategies were mentioned in relation to subject knowledge and pupil cooperation that was not always successful:

I find it difficult to come up with some form of support or other every time. (SA-MLA1-Boy)

If another child is uninterested, if I interfere at a particular moment, a child like this will come back at that moment, but the aforementioned will happen again. (SA-T2)



Thus, both the pupils and teachers expressed the importance of improving their interpersonal behaviour and supporting each other:

I would like my classmates to evaluate me and tell me what they think is not good in my behaviour. (SA-HLA2-Girl)

I know five of my colleagues to whom this would give wings, but there is no follow-up information. (SB-T2)

4.2.2. Pupils' FtFPI experiences and process

Three main subcategories contributed to an understanding of how the pupils and teachers experienced the FtFPI process from an organisational, individual and environmental perspective. Both pupils and teachers found that it is challenging to organise positive interdependence in FtFPI:

It's difficult when we're to bring all the ideas together. (SA-LLA2-Boy)

It's very hard for them to get organised because everyone wants to be in charge. (SA-T2)

Moreover, one of the pupils mentioned balancing between working on a joint task and helping others:

We have to think about how to make it a good process, to work on the task and to help. (SB-LLA1-Boy)

For this reason, almost all the teachers were facing challenges in planning and selecting the joint task for FtFPI:

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

Teachers and pupils experienced how pupils' characteristics and individuality shaped the FtFPI process:

He or she just keeps quiet. (SB-MLA2-Boy)

Pupils as passive observers in the group ... who don't want to accept help, probably due to their self-esteem. (SB-T1)

In the environmental-aspect subcategory, a considerable number of pupils focused on grades, while all teachers saw that grading pupils influenced the FtFPI process:

There's no chance of getting an excellent mark, and then there's no teamwork there. (SB-HLA1-Boy)

Some pupils request marks and learning outcome indicators from me ... this refers to knowledge and outcomes that are measured, not the interaction among pupils, and the latter is the key. (SA-T1)

4.2.3 Communication and support

The pupils and teachers were aware that both verbal and non-verbal communication are crucial for managing pupils' support by using attention, encouragement, praise and respect.

First, they pointed out how attention and respect may support FtFPI, but proper behaviour is also important:

I share my knowledge and allow them to share their knowledge with me ... to hear all their information. (SA-HLA1 Girl)

... To respect each other ... if they have good communication, mutually assist each other ... it absolutely leads to better learning. (SA-T2)

Moreover, listening attentively was a focus of the pupils' attention:

They look at me and listen and when I finish, they ask me something about what I have been talking about. (SA-LLA2-Boy)

However, both teachers and pupils found that paying attention is still challenging:

Working on communication needs to be improved, when it comes to their patience, listening. (SA-T1)

Some of them don't look at me when I'm talking, they turn away and speak when I speak. (SA-MLA1-Boy)

Almost all the pupils saw that encouraging and praising each other was a step in accomplishing the joint task, getting better grades and feeling good about themselves and their work. Moreover, the pupils understood that being encouraged is more about refusing to give up; peer praise refers to even small successes.

I can correct any bad mark because my classmates give me that power. (SB-LLA1-boy)

I feel like I can achieve much more. They open my eyes so I realise I have to work more. (SB-MLA3-boy)

Similarly, the teachers noticed that encouragement and praise helped the pupils to work better:

... often hear them commending someone ... this was an absolute impetus for some pupils for moving so much forward from the starting point while before they couldn't move at all. (SA-T1)

This teacher added that pupils' praise might be taken a step further towards rewarding peers for shared success:

They monitor and reward each other in terms of who progressed. (SA-T1)

However, all the teachers agreed that these dimensions take time and require constant effort to make them work:

It's difficult, tough and extremely demanding work. (SA-T1)

4.2.4. Improving knowledge and deeper learning about FtFPI

This category focused on pupils' preparation for FtFPI and teachers' influence. All the teachers thought that having more experience might improve the pupils' FtFPI:

The time and their experience of working together are important factors for improving. (SB-T2)

Involve them as much as possible, then they understand better. (SA-T2)

Moreover, the teachers needed more training, consistency and support in their practice:

I think it's a long-term process, but we can achieve this through consistency. (SA-T2)

To learn things, to see examples of other teachers, professors, experts in these fields. (SA-T3)

Most pupils explicitly said that they needed greater FtFPI skills to provide peer support:

- ... to know how to help and to be able to help others. (SA-HLA2-Boy)
- ... to learn how to communicate as much as possible to make our work better. (SB-HLA1-Boy)

One of the pupils emphasised teacher's monitoring as a necessary aspect influencing the learning process:

The teacher should listen when we're working to see whether we get along well in the group. (SA-MLA1-Boy)

5. Discussion

This article has posed two research questions. The first refers to the extent to which the aspects of FtFPI are most likely to influence pupils' CL group work. The second explores the challenges the pupils and teachers face when applying FtFPI. In the following, the quantitative and qualitative findings will be merged to shed light on the research questions.



5.1 FtFPI aspects that have great influence on pupils' small CL group work

Generally, the pupils positively express that both CL group work and peer support assist in their learning (67%). However, this study reveals differences between FtFPI aspects influencing pupils' learning together.

Almost all of the pupils (94%) state that their teachers have taught them how to support their peers, showing that teachers' promotion of FtFPI among pupils is one of the most important aspects leading to successful CL (Sharan 2010). However, 83% of the pupils believe that they could be better at helping their peers, and 15%, the majority of them boys, think that they lack sufficient knowledge to do this. This discrepancy between what pupils answer on the Likert scale and what they respond on the yes/no items is confirmed by the findings from the interviews. Pupils with a high and middle level of achievement, in particular boys, need to improve their knowledge on FtFPI. Similarly, teachers' responses in the interviews call for more education, support and consistency with respect to FtFPI. Dzaferagić-Franca and Tomić (2012) also note teachers' needs for more professional support, and Bronkhorst and Akkerman (2016) call for a pedagogical and didactic focus on interactional patterns between pupils.

The pupils report that giving and receiving help had a very positive influence on their CL group work. This finding agrees with previous studies on helping behaviours as a core contributor to learning in the pupils' promotive interactions (Gillies and Ashman 1998). The present study shows that girls are more likely to give help to peers and are more likely to believe that they can work better when receiving help from peers. Thus, teachers must understand that girls and boys may be drawing upon distinct cultures that may or may not support learning in their classrooms (Kutnick and Kington 2005). On the other hand, 17% of the pupils feel that they do not work well when giving help to peers. This surprising finding indicates that pupils probably need to have a better understanding of others' implicit needs, including how to initiate help (Gillies and Ashman 1998; Gillies 2003). Some pupils find that they need to have more skills in recognising and understanding each other's needs. This is confirmed by their teachers who point to the importance of eliminating factors that interfere with interpersonal behaviours.

The core dimensions of FtFPI that are identified in the literature on effective peer support during CL processes are a mixture of pupils' encouragement, attention and praise. Nearly eight of ten pupils (78%) in the present study report that peer encouragement and praise positively influence their CL group work to a very high degree. This finding is confirmed in the pupil interviews, in particular, one boy (SB-MLA3-boy) states that encouragement 'opens my eyes and I feel like I can achieve much more'. Moreover, teachers agree that 'this was an absolute impetus for some pupils to move on and make more progress' (SA-T1). This corroborates, as Gillies (2003) notes, the notion that pupils' self-efficacy is often raised by encouragement from their peers, while in turn, this has positive impact on their cooperative behaviour. However, 23% of the pupils express that their peers did not encourage them, particularly the boys and fourth graders, perhaps because they have insufficient skills in how to encourage peers, which is reported by 19% of the pupils. Similarly, 20% of the pupils do not receive any praise from their peers in their efforts to learn, which in turn may influence CL group work negatively, for example, if these two out of ten pupils are placed in the same CL group.

Too many pupils, 34%, do not believe that paying attention to peers improves their learning outcome, whilst 27% do not experience peer attention. The Likert scale corroborates this, where 36% of the pupils claim that this does not influence their CL group work. With such a lack of peer attention, it would be extremely difficult to respond to pupils' needs. Receiving a low level of peer attention may be due to the pupils' having a focus on grades instead of mutual learning. Accordingly, in their interviews, the pupils may be expressing that they are nervous about their school performance when they reveal that they are worried about their grades. For example, one of the high-performing pupils (SB-HLA1-boy) says that there is 'no chance to get an excellent grade'. Moreover, Hayek et al. (2017) found that the self-evaluation threat implied by grades is so

rooted in pupils that the mere mention of grades may impair group performance and intra-group relations. Thus, the present study indicates that maximising pupils' attention on each other during FtFPI may be beneficial in overcoming the challenges they are facing, for example, providing help and thinking about grades. Huber and Huber (2008) note that the pupils' attention may focus on learning processes instead of caring only for the production of a group result. Furthermore, the teachers' interviews highlight the need to improve their peer's attention, particularly the need to listen attentively. Similarly, 23% of the pupils confirm that their peers do not behave accordingly.

5.2 Pupils' and teachers' challenges when applying FtFPI

Both pupils and teachers confirm in the interviews that FtFPI in small CL groups facilitates the efforts of others to complete tasks during the pupils' learning process (Gillies and Ashman 1998). As one teacher states (SA-T1): 'This is about the power in what a peer can convey to another peer'. Despite the learning potential that FtFPI offers, the teachers and pupils face certain challenges when applying it.

Organising pupils in a promotive interaction session by balancing their equal participation in a joint task is the most challenging aspect that has been experienced by the teachers and pupils. The reason for this, according to the pupils, might be a lack of helping strategies. The teachers, on the other hand, point to a lack of 'consistency'. Perhaps this refers to a lack of clear behavioural norms that focus specifically on supportive interaction (Webb, Farivar, and Mastergeorge 2002).

It seems that the positive interdependence has not been adequately developed as a crucial part of the co-learning process. A considerable number of pupils mention this, but one teacher formulates this well (SA-T2): 'they do not have something that will indicate that they should help'. One of the complications seems to be the lack of detail, in particular, the explicit implementation of goal-interdependency among group members. Thus, positive interdependence and individual accountability have to adhere to the form of peer interaction to be cooperative (Johnson and Johnson 1999).

Teachers find it challenging to plan appropriate tasks that foster social growth and help pupils' achievement (Lotan 2003) when selecting and structuring joint tasks. Thus, teachers need to prepare for task-related interactions that can improve group productivity and co-learning (Cohen 1994). It is challenging to find the balance between preparing pupils for subject-related knowledge that will be measured and teaching pupils FtFPI. This can pressure the teacher's role in preparing pupils for successful FtFPI. It is interesting when a majority of pupils (94%) say that teachers teach them about FtFPI, when at the same time it also becomes clear that such preparation is not sufficient. In fact, systematic preparation is necessary for more effective and sustainable FtFPI (Dzemidzic Kristiansen, Burner, and Johnsen 2019).

Communication is one of the most challenging aspects as pointed out by both the teachers and pupils. In particular, the need to pay attention and listen to peers attentively requires careful consideration of peer respect, encouragement and praise. This is also verified by the pupil questionnaires. All the teachers agree that it takes time and consistent effort to develop pupils' FtFPI. Golub and Buchs (2014) argue that pupils who are prepared and think about cooperation display more support, actively listen and pay more attention to others. Likewise, the role of teachers has to be reconsidered with focus, as one pupil states, on teachers' monitoring of pupils while they are working in groups. This may help pupils to understand how the teacher monitors, supports and consolidates their interaction (Kaendler et al. 2015).

In fact, teachers need more cooperation amongst themselves by expanding this work to all stakeholders. This will make it possible to gain more support for what they are doing so they can improve FtFPI in CL. Currently, mutual support is seen as challenging, as one teacher stated (SB-T2) 'there is no follow-up information'. This teacher's need corresponds to what Jolliffe (2015) has pointed out, that extensive cooperation utilises effective networks where teachers share information and provide professional support to one another.



6. Conclusion

This study reports on the perceptions of primary school pupils and their teachers who had implemented CL in post-war BiH and investigates aspects of FtFPI. The findings reveal mostly positive beliefs on all aspects of FtFPI reported in the quantitative section of the study. Conversely, the pupils reported struggling with such aspects as paying attention to each other, listening carefully, encouraging and praising peers. Bearing in mind the development of pupils' promotive interaction (Sharan 2010), the present study finds a lack of positive interdependence. Moreover, both the quantitative and qualitative results show that pupils need to be more involved in small CL groups and need to acquire more knowledge about FtFPI. This refers to communication when interactively using such dimensions as attention, encouragement and praise. This also corresponds well with teachers' preferences to give pupils more exposure to FtFPI situations, as they are aware of the positive effects of cooperation on pupils' ability to learn (Kyndt et al. 2013). However, in the present study, the teachers' opportunities to develop and promote FtFPI face challenges.

Several challenges have been identified in the area of (1) pupils' organisation of FtFPI, (2) planning and balancing between working on an appropriate group task and supporting peers, (3) interpersonal behaviours that have been influenced by individuals' characteristics and (4) supportive communication. Finally, the process of developing FtFPI requires time, consistent support and more 'space' for working on pupils' FtFPI without pressure from grading. Even though teachers are highly regarded for their commitment to enhancing their knowledge and professional skills in implementing relatively short CL as an innovative practice in the BiH, there is a lack of adequate and ongoing support. To overcome the challenges, teachers and all stakeholders must cooperate if the potential of pupils' FtFPI as a social pedagogic tool is to be fully realised (Baines, Blatchford, and Webster 2015). Bearing this in mind, pupils and teachers do not merely need more insight into FtFPI in CL, but also into positive interdependence, individual accountability, social skills and group processing. With better insight, they can increase their knowledge on FtFPI, along with other elements of CL, aiming for long-term cooperation.

In the present study, generalisation is problematic as CL is not a common practice in BiH, and the study has only a small number of teachers and uses purposeful sampling. It is possible to say that 'analytic generalisation' (Yin 2009, 39) may enable the use of these empirical results in a similar context. The present study suggests that more classroom research is needed to investigate the pupils' practices related to aspects of FtFPI, such as promotive interpersonal behaviour and supportive communication. Ultimately, the possibility that pupils and teachers will reflect on their classroom experiences is a step towards improving the quality of education in BiH.

Notes

- 1. T1A and T2A (year 4 classroom teachers one and two from case school A). T1B and T2B (year 4 classroom teachers – one and two from case school B).
- 2. Each pupil in year four has been numbered in the following way: SA refers to school A; SB is school B. HLA 1pupil 1 with high-level achievement, HLA 2 - pupil 2 with high-level achievement and so forth. MLA 1 pupil 1 with mid-level achievement, LLA 1 - pupil 1 with low-level achievement and so forth. SA-HLA1= Pupil number 1 with high-level achievement in School A.
- 3. SB-T1 (School B Teacher one).

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No potential conflict of interest was reported by the author(s).

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Appendices

Appendix 1

Table A1. Pupils' opinions on aspects of face-to-face promotive interaction of cooperative learning.

Questions	Very little extent	Little extent	Some extent	Great extent	Very great extent	Mean	SD
Q1.To what extent would you say you often learn in	6.3%	10.9%	32.3%	28.6%	21.9%	3.49	1.14
group work?	(n = 12)	(n = 21)	(n = 62)	(n = 55)	(n = 42)		
Q2.To what extent would you say group work helps	4.7%	10.4%	17.7%	24.5%	42.7%	3.90	1.20
you to learn better?	(n = 9)	(n = 20)	(n = 34)	(n = 47)	(n = 82)		
Q3.To what extent would you say support from your	5.7%	9.4%	17.7%	31.3%	35.9%	3.82	1.18
peers helps you to learn better in group work?	(n = 11)	(n = 18)	(n = 34)	(n = 60)	(n = 69)		
Q4.To what extent would you say giving help to your	1.6%	7.3%	24.0%	25.5%	41.7%	3.98	1.05
peers improves your group work?	(n = 3)	(n = 14)	(n = 46)	(n = 49)	(n = 80)		
Q5.To what extent would you say asking for help	4.7%	5.7%	22.9%	35.9%	30.7%	3.82	1.08
from your peers improves your group work?	(n = 9)	(n = 11)	(n = 44)	(n = 69)	(n = 59)		
Q6.To what extent would you say listening	2.6%	4.7%	10.4%	30.2%	52.1%	4.24	1.00
attentively to your peers improves your group work?	(n = 5)	(n = 9)	(n = 20)	(n = 58)	(n = 100)		
Q7.To what extent would you say paying attention	6.3%	7.3%	21.9%	26.0%	38.5%	3.83	1.20
to your peers improves your group work?	(n = 12)	(n = 14)	(n = 42)	(n = 26)	(n = 38)		
Q8.To what extent would you say encouragement	1.6%	8.9%	12.0%	21.9%	55.7%	4.21	1.06
from your peers improves your group work?	(n = 3)	(n = 17)	(n = 23)	(n = 42)	(n = 107)		
Q9.To what extent would you say praise from your	2.6%	4.2%	15.1%	29.7%	48.4%	4.17	1.01
peers improves your group work?	(n = 5)	(n = 8)	(n = 29)	(n = 57)	(n = 93)		
Q10.To what extent would you say your teacher	1.0%	3.1%	5.2%	20.3%	70.3%	4.56	.82
teaches you how to give good support to peers in your group work?	(n = 2)	(n = 6)	(n = 10)	(n = 39)	(n = 135)		

Appendix 2

Table A2. Pupils' experiences and beliefs concerning giving and receiving help, peer attention, encouragement, praise, pupils' knowledge and teachers' role in CL group work.

Statements	No	Yes
Q1a. My peers receive my help in group work	6.8%	93.2%
	(n = 13)	(n = 179)
Q1b. I work well in groups when giving help to my peers	17.3%	82.7%
	(n = 33)	(n = 158)
Q2a. My peers give me help in group work	12.0%	88.0%
	(n = 23)	(n = 169)
Q2b. I work well in groups when receiving help from my peers	13.6%	86.4%
	(n = 26)	(n = 165)
Q3a. My peers pay attention to me in group work	26.6%	73.4%
	(n = 51)	(n = 141)
Q3b. I work well in groups when paying attention to my peers	34.0%	66.0%
	(n = 65)	(n = 126)
Q4a. My peers listen to me attentively in group work	22.9%	77.1%
	(n = 44)	(n = 148)
Q4b. I work well in groups when listening attentively to my peers	17.3%	82.7%
	(n = 33)	(n = 158)
Q5a. My peers encourage me in group work	23.4%	76.6%
	(n = 45)	(n = 147)
Q5b. I work well in groups when encouraged by my peers	14.7%	85.3%
	(n = 28)	(n = 163)
Q6a. My peers praise me in group work	19.8%	80.2%
	(n = 38)	(n = 154)
Q6b. I work well in groups when praised by peers	17.3%	82.7%
	(n = 33)	(n = 158)
Q7a. I have sufficient knowledge to help my peers in group work	15.1%	84.9%
	(n = 29)	(n = 163)
Q7b. I work well in groups when knowing how to help peers in group work	17.3%	82.7%

(Continued)



Table A2. Continued.

Statements	No	Yes
	(n = 33)	(n = 158)
Q8a. I know how to encourage my peers to participate and contribute to group work	19.3%	80.7%
	(n = 37)	(n = 155)
Q8b. I work well in groups when knowing how to encourage peers	18.3%	81.7%
to participate and contribute to group work	(n = 35)	(n = 156)
Q9a. My teacher teaches me how to support my peers in group work	6.3%	93.8%
, , , , , , , , , , , , , , , , , , , ,	(n = 12)	(n = 180)
Q9b. I work well in groups when my teacher teaches me how to	5.8%	94.2%
support my peers in group work	(n = 11)	(n = 180)