

Implementing Cooperative Learning: A Consideration of Barriers and Enablers

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Abstract

Cooperative learning (CL) is a pedagogical practice that has been shown to benefit students' social and academic abilities, yet it is not widely implemented in schools. This literature review explores current research on CL implementation in primary and secondary school settings in an endeavour to discover some of the barriers that keep teachers from implementing it in their practice. Three main barriers, discussed in this review, are teachers' understanding of CL, students' social skills, and time and organisation requirements. To counteract some of the perceived barriers of CL, enablers to CL have also been explored. Enablers discussed within this review include pre-service and continuing teacher CL training, teacher collaboration, and student social skills development. These enablers can help to counteract some of the perceived barriers in order to facilitate greater implementation of CL in the classroom.

Keywords: *Learning, Barriers, Enablers, Teachers, Students, Time, Social Skills, Understanding, Training, Collaboration.*



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Introduction

For teacher and learner roles to change, teachers need to start changing some of the pedagogies that they are using in everyday practice. Cooperative learning (CL) is a teaching pedagogy that shifts practice from more traditional teaching methods to a context where students have more control of their learning. In CL, students work together in groups to jointly construct knowledge through cooperative interactions. When implemented correctly it strengthens students' academic and social skills (Brown & Thomson, 2000).

While there has been extensive research on the benefits of CL, there has been less research on why, despite the known benefits for both students and teachers, CL is not being successfully implemented, or implemented at all, within many classrooms. This literature review seeks to summarise this research on the barriers to implementing CL, while also exploring some enablers to CL. It refers to recent literature with a focus on primary and secondary contexts.

First, a summary of CL is presented, including the critical elements for its success, the benefits of implementation and current implementation rates. Next, three identified barriers to CL implementation (understanding of CL, students' social skills, and time) are discussed. In an attempt to counter these barriers,

three enablers are explored (CL training, teacher collaboration and student social skills development) that could encourage teachers to use CL. Finally, the relation of the research to the New Zealand context is discussed.

Cooperative Learning

CL is a teaching method in which students work together to gain a greater understanding of a topic. It is a student-centred pedagogy where the teacher's role changes from being the deliverer of information, to facilitating students' learning, as they gather their own knowledge and create their own meanings. [Johnson and Johnson \(2009\)](#) outline five critical group elements that are necessary to ensure that a CL task is most effective: positive interdependence, individual accountability, actions promoting interaction, appropriate social skills, and group processing. When these five elements are all achieved group members experience the greatest benefits. These include academic benefits, like higher achievement levels and more metacognition, and social benefits such as gaining group working skills, greater self-esteem and more positive peer relationships ([Jolliffe, 2015](#)).

Despite the extensive research supporting the use of CL and praising its benefits, CL is generally under-used in schools



(Muijjs & Reynolds, 2005, as cited in [Hennessey and Dionigi, 2013](#)). However, it is difficult to know exactly what the implementation rates of CL are because they vary widely among the research. For example, a survey of 207 elementary school teachers in Geneva, Switzerland, ([Buchs, Filippou, Pulfrey & Volpé, 2017](#)) found that only one third of teachers reported using CL routinely. In contrast, another study of 933 Canadian teachers ([Abrami, Poulsen & Chambers, 2004](#)) found that 61% of teachers at least “somewhat incorporated” (p. 210) CL into their practice, though this may have been influenced by a self-serving social desirability bias. These low implementation rates may be due to the perceived challenges of implementing CL. In the literature, studies have uncovered many perceived barriers to teachers’ implementation of CL teaching, such as students’ ages, lack of subject knowledge, changing pedagogy and challenges evaluating pupils’ achievement. This literature review focuses on three of these: teachers’ understanding of CL, the social skills and behaviour of students, and the time and organisation required. However, research also reveals that there are possible enabling factors that could counter these barriers and help encourage teachers to implement CL pedagogies in their classrooms: CL training, teacher collaboration and student social skills development.

Barriers to Cooperative Learning

Teachers’ understanding of CL

Teachers’ understanding of CL and various CL structures varies greatly within the teaching profession. Some teachers have had no exposure to or specific training on CL, whereas others have a wealth of knowledge, having participated in CL professional development and used it extensively in their own teaching practice. [Hennessey and Dionigi \(2013\)](#) argue that teachers’ knowledge of CL affects their ability to implement it successfully. Their qualitative study on 12 Australian primary school teachers, investigated teachers’ understanding of CL and the believed factors affecting implementation. Half of the 12 participants had limited knowledge of CL, four had general knowledge and two had expert knowledge. Firstly, they found that teachers’ limited understanding of CL was a barrier to successful implementation because it meant that they did not include the five critical elements ([Johnson & Johnson, 2009](#)) necessary for success in their teaching. For example, one teacher believed that she needed to have a high-achieving student leading the group to help less able students achieve, which negates the positive interdependence and individual accountability elements of CL. Importantly, it was these teachers, with limited knowledge of CL, that identified several barriers to implementing CL. These included the age of the students, student behaviour and giving students more control and independence. Teachers with greater understanding of CL did not identify these factors as barriers and instead were able to employ teaching techniques within their CL structures that eliminated these factors from being barriers.

Even teachers who have had explicit training in CL can find using CL structures in their lessons difficult. A New Zealand study by [Dyson, Colby and Barratt \(2016\)](#) investigated using CL structures to teach physical education in primary schools. Participants were 12 teachers from four schools, who all received specific CL professional development as part of the study. They also had support from university faculty and graduate students

who provided them with modelling and planning of CL physical education lessons. This study revealed that although these teachers had knowledge of CL, and had used it in some subjects, they had not used it in physical education before and often did not know how to adjust CL structures to that curriculum area. They needed further understanding of what CL was and what it looked like in the subject area of physical education to be able to successfully implement it.

Students’ social skills

While student social skills can develop greatly during CL tasks, the initial social skills ability of students has been identified as a challenge to successfully implementing CL ([Dyson et al., 2016](#)). Some students do not develop essential social skills at home (e.g., cooperation, respect and listening) providing difficulties for these individuals when relating to others. In [Dyson et al., \(2016\)](#), teachers identified this issue, with one teacher citing that social skills was the top challenge for implementing CL. These teachers believed social skills were hugely important and, without them, the CL structures they were trying to implement simply broke down. They recognised the importance of developing student social skills at an early age, and noticed that when students had developed sufficient social skills early in schooling it made it easier for them to implement CL structures in later years.

[Abrami et al. \(2004\)](#) found from their CL implementation questionnaire that it was the teachers who believed their students had the necessary social skills (or could easily acquire them) to make the activity successful that implemented CL. These teachers did not use CL if they thought it would lead to behaviour problems, indicating that behavioural issues made implementing CL too difficult. The authors also found that teachers were more interested in developing their students’ social skills than academic skills through CL structures, perhaps due to the recognition that their social skills needed improvement.

[Gillies and Boyle \(2010\)](#) explored the perceptions of 10 Australian middle school teachers who implemented CL over a period of two school terms. These teachers all recognised the importance of having appropriate social skills within a CL task. Of the 10 teachers, some explicitly taught the social skills necessary for working in cooperative groups (e.g., through lessons examining successful cooperative groups), while others had more general discussions with their classes to prepare them (e.g., discussing everyday respectful social behaviours). However, teaching these specific social skills requires thought and time, and as a result it can often be neglected, meaning that groups are not able to function to their highest potential.

Time and organisation requirements

Another challenge that teachers face when implementing CL in their classes is the time involved. Firstly, time and organisation is required by the teacher to get CL structures prepared. Teachers from the study of [Gillies and Boyle \(2010\)](#) cited the time and work required to find suitable tasks, resources and set up group organisation as challenges to implementing CL structures.

Secondly, time spent on CL in class was also a challenge. Teachers reported having difficulty managing time related to setting up and implementing CL learning in their classes ([Gillies & Boyle, 2010](#); [Buchs et al., 2017](#)). Often, considerable time is needed to first introduce students to CL structures and their

required roles and behaviours (Dyson et al., 2016), including teaching social functioning skills, mentioned above, so that they can effectively cooperate. Fortunately, Buchs et al. (2017) found that teachers found this preparation of their students relatively easy.

However, although time requirements are generally identified as a challenge in implementing CL, research by Abrami et al. (2004) found that time was not a major factor that affected whether teachers used CL or not. This may be because they placed value in CL, despite the time requirements, and were relatively confident in it being successful.

Enablers to Cooperative Learning

Initial and continued training in CL

Lack of knowledge of CL appears to play a large role in why CL is not widely implemented. Therefore, it is important that teachers receive training on CL and how to integrate it into their curriculum areas. Hennessey and Dionigi (2013) believe that repeated and deep exposure to CL is necessary for both pre-service and in-service teachers so that they can effectively implement it into their teaching programme. Therefore, the first step in ensuring that teachers use CL, and use it effectively, is to provide a pre-service education context where student teachers can improve their knowledge and work on the skills needed for implementing CL. For example, 105 pre-service teachers in Belgium showed self-evaluated improvement in their CL skills (e.g., providing organisation, social and metacognitive guidance) over several practical lessons they taught (Ruys, Van Keer & Aelterman, 2011). Surprisingly, prior exposure to theoretical CL knowledge had no impact on these skills. This highlights that while it is important to have a basic grounding in CL theory, opportunities to implement CL in practical teaching settings are most important.

Once pre-service teachers have received (hopefully comprehensive and practical) training in CL learning, it is important that they continue to receive support in teaching CL structures throughout their teaching careers. Abrami et al. (2004) suggest that continued training throughout a teacher's career may be essential to refine CL strategies and skills, as well as to adapt teaching to a specific institution's environment, thus ensuring that teachers continue to implement CL.

Similarly, teachers must feel positive about CL to implement it. Research in Spain by Saborit, Fernandez-Rio, Estrada, Mendez-Gimenez and Alonso (2016) investigated this factor. The 990 primary and secondary teachers in their study had completed a year-long CL training programme consisting of weekly professional development. This training focussed on conditions for success, different classes and subjects, and gave teachers new techniques as well as feedback on their practical implementation. The researchers found that, after completing the training, teachers had a strong positive attitude towards implementing CL, as well as to changing their practice through a CL pedagogy. This was also found by Gillies and Boyle (2010) where teachers participated in CL workshops before the study and came away with positive attitudes towards implementing CL in their classes. Finally, Abrami et al. (2004) found that the teachers who frequently used CL in their classrooms were those who felt like they had been provided with good training.

Therefore, it is important that CL professional development is high-quality and effective so teachers feel like they have the ability to implement CL in their classrooms.

Teacher collaboration

Teacher collaboration is incredibly important for teachers' continued implementation of CL. Jolliffe (2015) examined how teacher cooperation affected CL implementation, as in this study there was a supportive network of teachers and facilitators. These networks provided both emotional and practical pedagogical support for teachers. All members collaborated and were working together for mutual benefit. In this study, the support the teachers got from their learning community gave them the confidence to use CL. It also enabled them to develop their skills in CL, form shared resources and have valuable discussions, all while feeling trust and support from the group.

Dyson et al. (2016) also identified the impact of collaboration in their study. Teachers were supported by a group consisting of university staff, graduate students and other teachers. The group met regularly to discuss practice, share resources, and teachers were supported by a critical friend (faculty member) who also modelled lessons for the teachers and scaffolded their learning. It enabled teachers to persist with using CL structures in their classrooms as their colleagues supported them in overcoming initial difficulties. This positive outcome is consistent with Abrami et al. (2004) who believed that creating mutually supportive communities for teachers to discuss their CL teaching would increase the likelihood that CL would be implemented.

Farrell and Jacobs (2016) also discuss teacher reflection groups. They suggest that groups of teachers reflecting on their practice operated using the critical elements of CL, therefore these teachers were experiencing group cooperation situations similar to their students. This could increase the quality of reflection which in turn should increase the quality of CL teaching. Furthermore, when teachers experienced their own success from participating in CL groups, they were able to see the benefits of their students learning in the same way and therefore they were more likely to use CL. Moreover, this belief in cooperation, and the support from the reflective group, meant that teachers were more likely to persevere with CL teaching practices when they encountered barriers towards CL teaching.

Student social skills development

Another practice that could make CL seem more accessible to teachers is developing students' social skills. Having interpersonal and small group skills is one of the critical elements outlined by Johnson and Johnson (2009) for CL to be most beneficial. Therefore, it is important that students possess these social skills before undertaking CL activities so that they can gain the most from them.

A study by Golub and Buchs (2014) investigated the effects of social skills training given prior to a CL task. Participants in the study were 32 grade six students from the French-speaking area of Switzerland. Half the students were given a social skills preparation intervention before a paired CL task. Results showed that student pairs who had received the intervention were more attentive and supportive of each other, and asked more questions, although no difference in learning outcomes was found. This confirms that, with additional social skill support, students can function more effectively in a group setting, likely resulting in

fewer behavioural issues that could impede learning and require teacher intervention.

A study by [Baines, Rubie-Davies and Blatchford \(2009\)](#) showed the positive effects that a social skills training programme had on a group. In their study, 31 groups received a skill development condition (social, communication and group work skills) while 29 groups acted as controls. Groups who received the social skills training condition functioned better as a group, displaying increased positive behaviours like engagement and sustained, thoughtful discussion. They also displayed fewer negative behaviours like refusal to participate and off-task talk. This demonstrated that by implementing social skills development programmes before teachers introduce CL structures to their class, students are better prepared to participate in CL appropriately. Therefore, students are more likely to benefit from the CL task and teachers are likely to have fewer behavioural issues to deal with, making the task run more smoothly. This could lead to teachers feeling more positive about implementing CL as there would be less need for them to intervene because of social issues. Instead, they could focus on facilitating the deeper learning that can occur through CL.

The New Zealand Context

A limitation of this review was the lack of research from New Zealand, with only one recent research article on CL from the New Zealand primary and secondary school setting ([Dyson et al., 2016](#)). While this is a limitation, it also identifies a research gap. The skills involved in CL align with values identified as a core component of the New Zealand education system. For example, skills gained in CL relate to the key competencies in the New Zealand Curriculum (Ministry of Education (MoE), 2007). For example, *thinking skills, relating to others* and *managing self* are all aspects that link directly to CL pedagogy. CL also aligns with Tātaiako competencies (MoE, 2011), with *ako* – learning from one another – being at its heart. Therefore, it is important that more research is undertaken on CL effectiveness and implementation in New Zealand school settings. Additionally, teachers in New Zealand must overcome any perceived barriers to implementing CL for the benefit of all their students. Specifically, they must seek to receive high-quality and practical CL training, collaborate with other teachers in their CL practice and teach their students the requisite social skills for CL tasks to run smoothly.

Conclusion

This literature review has explored cooperative learning and uncovered some of the barriers teachers experience when implementing it. The barriers of understanding CL, student social skills and time costs were examined. Then, the potential enablers of CL training, teacher collaboration and social skills development were considered in the hope that engaging in these would lessen the challenges teachers face when implementing CL. If teachers are able to take on these practices for CL, then maybe they will feel more confident in adopting CL into their personal pedagogies for the benefit of all students.

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