

Cooperative Learning as a Pedagogical Practice for Learning in Physical Education

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The Cooperative Learning model has been used worldwide in physical education to promote social and psychomotor learning for more than 20 years (Dyson and Casey, 2012). Cooperative Learning is a dynamic instructional model that can teach diverse content to students at different grade levels. Students work together in structured, small, heterogeneous groups to master subject matter content. Heterogeneity (in other words diversity in terms of socio-economic background, gender, race, prior attainment, friendship and so on) is a vital element of the model. With this in mind Cooperative Learning works best when the groups inherent in the model are kept small and we recommend groups of four (if content or classroom dynamics allow).

Many teachers at the primary, secondary and tertiary level have experimented with Cooperative Learning. In fact, there is a large body of research, evaluation and practice of Cooperative Learning in many different subject areas in teaching at these different levels (Cohen, 1994; Kagan, 1992, 2012; Johnson and Johnson, 2009; Slavin, 2010). In addition, there is a growing body of research on the Cooperative Learning model in physical education (Casey, Dyson and Campbell, 2009; Dyson and Casey, 2012; Dyson, Linchan and Hastie, 2010). However, the full potential of Cooperative Learning is only realised when teachers take this model and use it to enhance the development of specific social skills that, in turn, can contribute to the development of motor skills and tactics and strategies in their own school context.

In a recent evidenced-based research text, Dyson and Casey (2012) defined Cooperative Learning in physical education as:

A pedagogical model that, through its five elements, explores the social-cultural significance of human movement through the use of individual and group learning outcomes to enhance student development, interaction and task-mastery within the three learning domains: physical, cognitive and affective.

In defining the model as such we build on a growing body of knowledge in physical education that supports these claims. The three papers that follow in this special edition of *Research Matters* lend greater credence to these claims. However, at the heart of this definition are five elements of Cooperative Learning that foster learning in equitable classrooms and support the development of social and cognitive skills and mutual trust.

The five elements

In Cooperative Learning in physical education (Dyson and Casey, 2012), there are five critical elements that are commonly seen as the benchmarks or "non-negotiables" (Goodyear, Casey and Kirk, 2012) of the model:

i) Positive interdependence, ii) Individual accountability, iii) Promotive face-to-face interaction, iv) Interpersonal skills and small group skills, and v) Group processing. These elements form a key facet of the Cooperative Learning model and are précised below.

Positive interdependence occurs in your class when students rely on each other to be successful. In other words, your students should perceive that they are linked to their group members in such a way that they cannot succeed unless all of the other group members do so as well. That is, students work with each other to complete the predesigned task, that is, "we sink or swim together" (Johnson and Johnson, 1989). To develop such links we would advise physical educators to use specific Cooperative Learning structures (like Jig-saw, Think, Pair Share and Learning Teams) and these are designed to enhance interdependence, among the other basic elements of Cooperative Learning (Dyson and Casey, 2012).

In physical education and sport we are familiar with many examples of *positive interdependence*. In fact, it could be argued that every team sport

requires it to be successful. For example, in volleyball we rely on a pass from the backcourt to the frontcourt to set up the attack; in rugby the props hold up the scrum; in rowing each rower must row in time to move the boat forward efficiently. In your physical education setting, when your students rely on each other to complete the task, you are setting up a task for students to be positively interdependent.

Individual accountability refers to students taking responsibility for completing their part of the specified motor, tactical or social task for their group. Accountability mechanisms like student task sheets can help hold students individually accountable and create a situation where assigned tasks are more explicit for students.



Promotive face-to-face interaction is literally head-to-head, toe-to-toe and/or knee-to-knee positive discussion within the group while group members are in close proximity to each other in order to complete the task.

Interpersonal and small group skills are student behaviours that allow free and easy communication between group-mates. These important social skills are developed through the tasks that students participate in and may include listening, shared decision-making, taking responsibility, giving and receiving feedback, and encouraging each other.

Group processing is usually witnessed in the form of an open dialogue or group discussion related to the lesson content that can occur at any time during the lesson. Group processing is a cognitive or knowledge task and often is represented in physical education as 'strategising', that is, the students in their team talk about and create an offensive or defensive strategy (see Dyson, *et al*, 2010).

It is important to note that we believe you as the teacher create the positive learning environment for Cooperative Learning to be used effectively. If this model is to thrive, a teacher must take on the role of facilitator of learning in which 'wrong turns' are permissible. This is in contrast to other approaches where the teacher is often seen as the conductor of the orchestra who strives for the perfect performance from each player. Cooperative Learning is a student-focused pedagogical practice, not a teacher direct instructional model.

Three studies in three settings

In the first paper Carlos, a primary school teacher from Spain, explores Cooperative Learning as a pedagogical approach that encourages students to work "with, by and for each other" (Metzler, 2011). Carlos argues that, while the approach is often described, specific examples of practice and implementation are rarely described. Using the Cooperative Learning structure 'Learning Teams' he gives a clear example of how the different elements of the model can be effectively combined in the teaching of jump rope. Preparation is key. This means preparing the classroom and the learning materials, as well as the students, for the changes that are occurring within your lessons. The use of Cooperative Learning does not occur by chance but is a designed experience in which students are supported in learning how to respect classroom rules, assume different roles, regulate conflicts, respect one another and identify mistakes (both theirs and their peers'). Sharing some of his resources with the reader, Carlos gives a great example of how Cooperative Learning can be used to teach jump rope through group interaction and shared responsibility for learning.

In the second paper Michelle and Pat, who both work in the USA, draw on a number of studies to exemplify how Cooperative Learning has been utilised to facilitate inclusion in physical education. Suggesting that the model is apt at developing students' cognitive and social skills, they also argue that it is an approach that helps to promote equitable peer relationships through positive interdependence and shared responsibility for learning. Furthermore, the experience of Pat, a physical education specialist at the primary level, also shows how Cooperative Learning can be used as a catalyst for reducing barriers and prejudice against students with disabilities. Drawing on case studies, this paper shows how two students – one with cerebral palsy and another with autism – were integrated into an inclusive physical education classroom. Through adaption and the careful grouping of children, Michelle and Pat show how students who may previously have been marginalised and excluded – despite the teacher's best intentions – are included and find a place to thrive through Cooperative Learning.

In the final paper Victoria, with the help of eight teachers in two schools in the UK, offers some top tips for using Cooperative Learning across the curriculum. Supporting the previous suggestions by Carlos, Michelle, Pat and ourselves, this paper develops the idea of elements and positions them as non-negotiables in the use of Cooperative Learning. In other

words, these practitioners show how, by adhering to these elements and aspects of the model, they start to change their approach to teaching in the gymnasium and beyond. Importantly, this research shows that change takes time. It is not easy to embed a new approach to teaching and learning in physical education but, with support and slow but certain steps, meaningful and lasting change can occur. However, Buckingham School's use of Cooperative Learning has been so successful (acting as a fulcrum of teaching and learning in the physical education department and wider school) that it was recently awarded the Youth Sport Trust's Gold Award for their cooperation, leadership and internal professional development programme.

Our research in schools over the last decade has contributed to the development and understanding of the processes of how students learn in groups (Dyson and Casey, 2012). We believe that the work in schools by Carlos, Michelle, Pat and Victoria are great examples of school-based practice and research that can contribute to our understanding of what quality physical education might look like. We believe that Cooperative Learning can be one of the many appropriate pedagogical models that physical educators can use to enhance their physical education practice. Please experiment with it in your physical education programme and then share your experiences with us – we look forward to hearing from you.

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