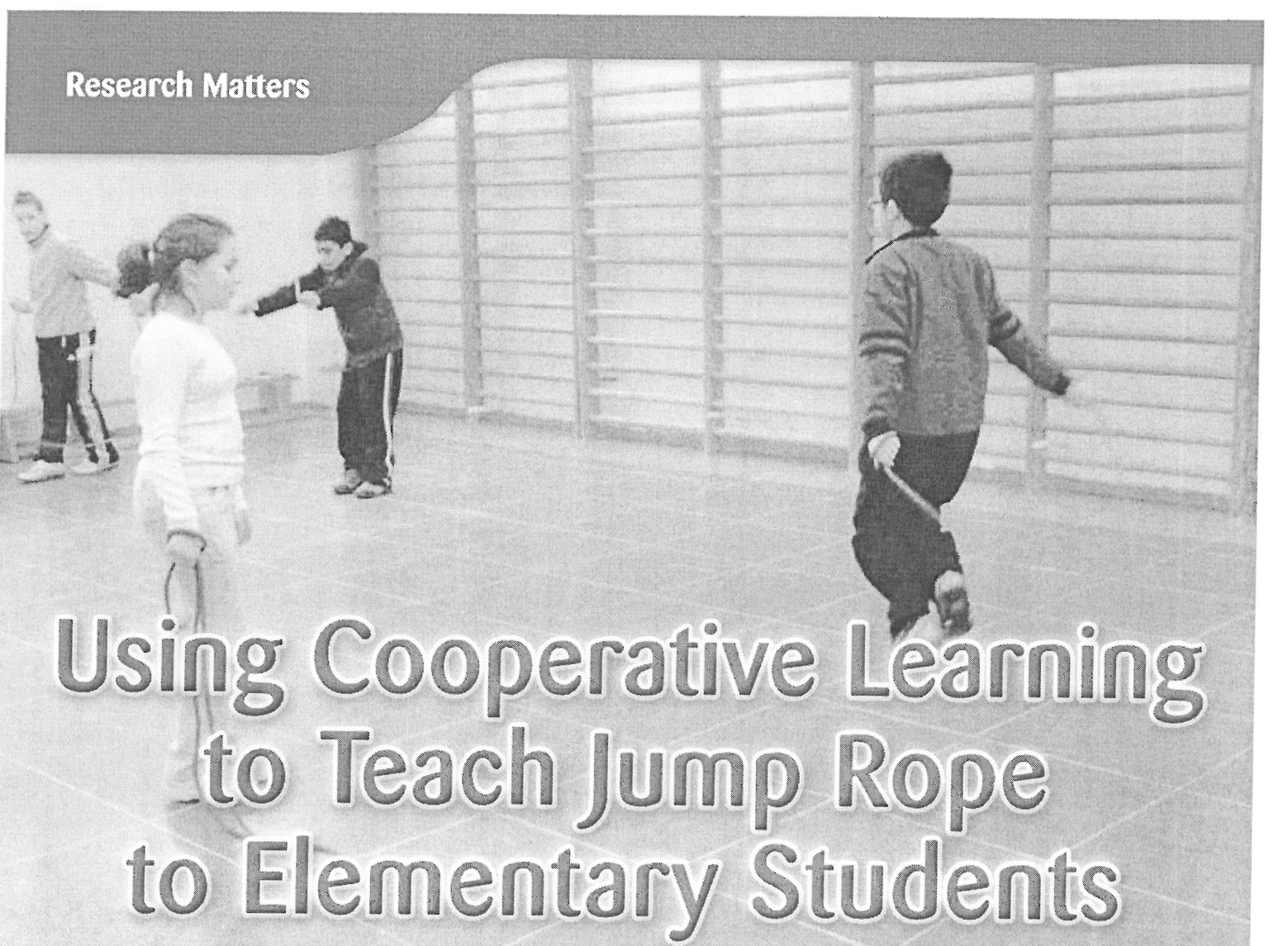




Using Cooperative Learning to Teach Jump Rope to Elementary Students

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Introduction

Cooperative Learning is a pedagogical model in which students work together in small, structured and generally heterogeneous groups (i.e. diverse in character, race and gender) to maximise their own and each other's learning (Johnson and Johnson, 1999; Slavin, 1999). Metzler (2011) includes Cooperative Learning among the eight instructional models he examines in physical education and defines the model as a set of teaching strategies where students learn with, by and for each other.

During the last decade, different researchers have emphasised the advantages of Cooperative Learning to promote motor and social learning (Barrett, 2005; Dyson, 2001, 2002; Goudas and Magotsiou, 2009). However, the specific procedures for implementing Cooperative Learning in physical education classes are rarely described in a way that other teachers can use them with their students and in their classrooms. In this sense, I intend to explore the process of implementing a 'learning unit' of Cooperative Learning. Specifically, I will use the example of a unit I designed for use in a physical education class with elementary students. In this paper I focus on the application of a Cooperative Learning technique called 'Learning Teams' (Dyson and Grineski, 2001;

Grineski, 1996) to learn to jump rope with students of fifth grade of primary education.

Preparing students for cooperation

Before introducing Cooperative Learning it is important to prepare students by creating a favourable climate for cooperation, mutual aid and solidarity (Pujolás, 2008). In this sense, the early steps in a unit of work should be used to ensure that students understand the logic of cooperation, that is, the individual and collective benefits students should strive for and enjoy when using the model in practice. To do this you might use cooperative or team-building games as a means of introducing the students to the notion and realisation that cooperation is often for the collective good and is instrumental in the attainment of certain goals. "Cooperative games are group activities in which there is no opposition between the actions of the participants, who all combine their efforts, give and ask for help and contribute to reach the same goal or several complementary goals" (Velázquez-Callado, 2012a: p. 62-63). Cooperative games, combined with other actions related to the organisation and management of lessons,

can be an excellent way to promote a change in mind set of students used to competing against their peers (Filinson, 1997; Street, Hoppe, Kingsbury and Ma, 2004).

These experiences should be designed to help students to: (1) respect the basic rules of the class, (2) assume different roles and individual responsibilities, (3) have strategies to regulate the most frequent conflicts without the intervention of the teacher, (4) show behaviours of respect and support of classmates and (5) be able to identify their own and their classmates' errors and to use appropriate strategies to correct them. Once students have experiences with and understand strategies then it becomes increasingly possible to introduce structured Cooperative Learning processes with a high probability of success.

Applying Cooperative Learning: prior decisions

Before beginning any Cooperative Learning unit, the teacher has to make a number of decisions around the content of the unit of work. This will probably involve the development of work sheets and the formation of the groups.

The development of work sheets

Using Cooperative Learning as the central pedagogy or pedagogical model in physical education implies that the teacher has made a conscious decision to offer greater freedom to students in the organisation their own learning. Therefore, the teacher needs to find ways to facilitate that freedom, taking into account the students' previous experiences with teamwork and their current and developing social skills. In this sense, it is advisable that the teacher develops specific resources to guide the learning process of each group into which students are placed and in which they will learn. As an example I have developed the following materials:

- collective goal, introduced as a challenge, and individual responsibilities sheet (Figure 1)
- table of results obtained at each session (Figure 2)
- tasks map (Figure 3).

Figure 1: Collective goal, introduced as a challenge, and individual responsibilities sheet

CHALLENGE AND RESPONSIBILITIES

Challenge: all group members have to make 15 consecutive jumps with a single rope, using four different types of jumps. During the following four sessions, your group will have a half class to practise (100 minutes total).

Your individual responsibilities are to:

- teach jump rope to everybody in your group who doesn't know how to do it
- decide, with your group mates, four individual types of jump and respect the ones chosen
- help group mates who have difficulties jumping the rope to achieve the challenge of 15 consecutive jumps using four different types of jump
- encourage your group mates when they have difficulties instead of criticising them
- count the jumps you do in each selected type of jump and write your best scores in the worksheet
- jump rope 15 consecutive times using each selected type of jump.

Figure 2: Table of session results

TABLE OF SESSION RESULTS

Date: _____ Your better jumps

	Type 1				Type 2				Type 3				Type 4			
Names	A	3 rd	2 nd	1 st	A	3 rd	2 nd	1 st	A	3 rd	2 nd	1 st	A	3 rd	2 nd	1 st
d																
d																
d																
d																

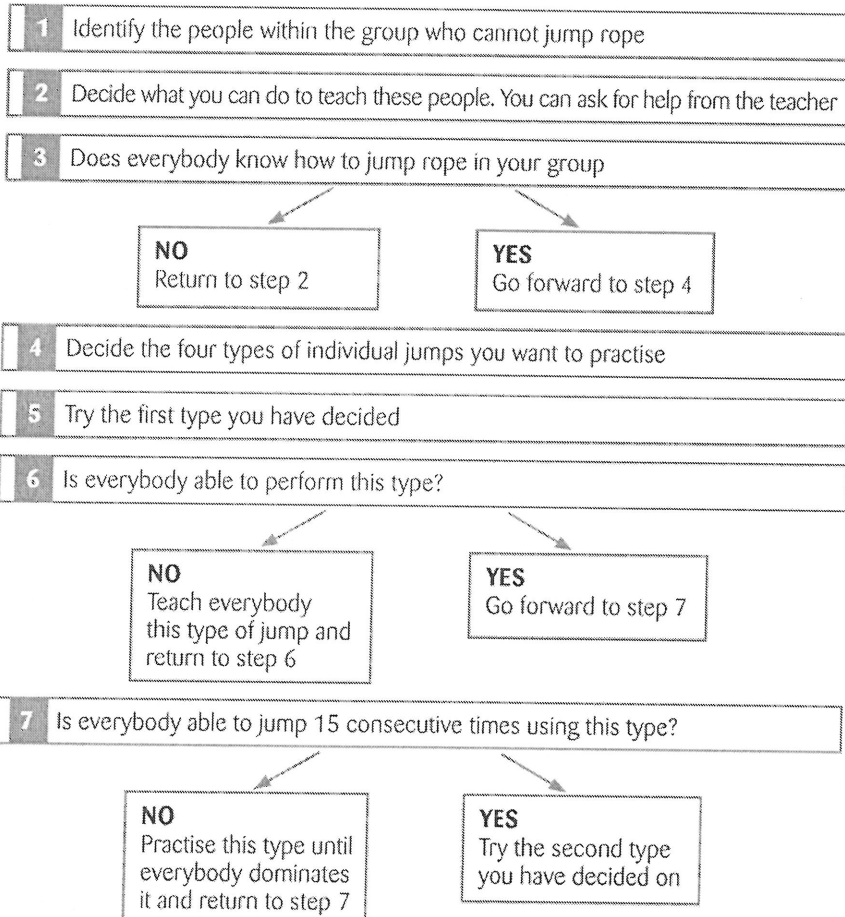
A = Total number of attempts you have done 3rd = Your third best result
2nd = Your second best result 1st = Your best result today

Figure 3: Task map extract

TASK MAP

This task map will help you to understand what you have to do at any moment to reach your first challenge. If EVERYBODY agrees and you want to change something, you can do it after asking the teacher.

Do not forget to tick the box next to the number when you have completed the task indicated.



The formation of the groups

There are different ways of grouping students, from student self-selection to teacher assignment, and including random assignment. If students have to work together for several sessions, then allowing them to form their own groups is considered to be the least preferred option (Gavilán and Alario, 2010; Johnson, Johnson and Holubec, 1999). This is because students tend to choose their group mates based on the learners' ethnicity or gender and consequently will have less autonomy as individual learners (Cohen, 1999). Other significant risks are that students with less ability can be grouped together without the resources or understanding to help each other (Kagan, 2000) or that friendship groups could reduce the chance to socialise with others (Putnam, 1997). However, my work (see Velázquez-Callado, 2012b) with elementary students has shown that when the students are free to choose their groups, and they have the necessary conceptual and social skills, and every group member meets their individual responsibilities, then they are more likely to achieve the desired task. So, should the teacher create the groups? I would recommend a compromise. On the one hand try to take into account the preferences and wishes of students and, on the other hand, group the students in a way to avoid the above mentioned risks. To do this, Marín and Blázquez (2003) suggest that the teacher groups the students after a sociometric analysis has been carried out by the teacher. The sociometric analysis combines variables of friendships with others and of heterogeneity (i.e. ability, gender, socio-economic background and so on).

In any case, an initial assessment is needed in order to form heterogeneous groups based on their motor skill level related to the task that will be tackled. In my case, I used an initial test of single rope jumping where students were asked to have three attempts to jump the rope both forwards and backwards and to write down their results (with no more than 30 jumps in each attempt). From the mean scores I am able to classify students so that all the groups contain students with high, medium and low initial achievement scores with regards to the task of jumping rope.

Explaining the task and how to implement it

If students have no experience of Cooperative Learning, it is necessary to introduce both the task to be performed and the way it will be carried out. To that end, an initial session can be used to introduce the students to the



teaching approach. In his work in secondary school physical education Casey (2010) called this "lesson zero" and he used it at the start of every Cooperative Learning unit to introduce or reintroduce the students to the approach and reinforce his expectations for the students and the groups. These activities are designed to get the students to cooperate and develop team building skills whilst also understanding the teacher's expectations around the unit of work. In my teaching I use this lesson to introduce the students to the set of worksheets we are going to use, the aims of the unit and the achievement and marking criteria. As the teacher I explain how the groups will be formed or, if I have decided to form the groups myself, I will give out the names of the students who will work together in each group. In the case of jump rope, groups of four students are formed which are heterogeneous with respect to gender, ethnicity and motor ability levels. These groupings also take into account other social criteria, for example, grouping a child with difficulties creating and sustaining relationships with students with more pro-social attitudes.

A key element is that the teacher emphasises positive interdependence (i.e. that students can only succeed if they are willing to work together). This needs to be taught in conjunction with goals for individual accountability of each student (i.e. if somebody fails in the group then the whole group fails). To reinforce these elements teachers can allocate different and specific roles to the students, roles that they will take on individually. In my case, I propose:

- keeper: takes care of all equipment used (i.e. the ropes) and ensures their correct use
- recorder: writes down the day's results
- encourager/praiser: uses words or phrases to offer praise or to acknowledge the effort of team mates to foster interaction
- organiser: takes care that everybody is focused on the assignment, trying to ensure that no one fools around.

Developing the task using Cooperative Learning

During the session, the students work in their groups according to the task map. Each group has an assigned place in the gymnasium and stays in it for the lesson and/or the unit. As the teacher, I walk around the groups taking notes about the students' contribution that catches my attention while providing feedback and support when it is needed. Such teacher interventions are intended to guide the work of the groups through questioning so that the students are encouraged to find possible answers by themselves rather than the teacher providing them. While I am walking around the gym, the students are responsible for writing down the results of their attempts at the jump rope task. Those students who experience difficulties receive support and help from their team mates who provide feedback that hopefully allows them to correct the mistakes they are making.

In the case of my jump rope lessons, the groups worked in learning teams for half of each session (i.e. 25 minutes). Then, the students had limited time to engage in group processing. In this section of the lesson, students debate within their group, talking about their work before filling out the table of results for that session. Next, two learning teams join together to form a group of eight students and continue to work on the task of jump rope through cooperative problem solving. In this way, as the teacher, I would present a problem to the group that the students then try to solve. For example, what is the minimum number of turns of rope your group needs so that all of you attain two consecutive jumps? Finally, from the notes I take during the lesson, and the analysis of the results table of each group, I am able to write up a set of observations that form the basis of our discussion before the start of the next lesson.

This working structure is maintained for four sessions. Then, the students undertake an individual test to check their progress in relation to the first aim of the learning groups. Later, a second aim, orientated to jumping rope in pairs, is introduced and the same groups work together to improve using the same Cooperative Learning structure.

Figure 4: Extract of social skills for individual group-assessment

INDIVIDUAL GROUP ASSESSMENT SHEET

Name: _____
Date: _____

We are learning and one of the first steps is to identify what we still have to improve. So, read the next sentences about your work today and mark your answer. Remember to be honest: there is no right or wrong answer to the question, your opinion is valuable.

Disagree ←————→ Agree

1 2 3 4 5 6

Mate 1: _____	1	2	3	4	5	6
Assumes his/her responsibilities						
Helps group mates with difficulties						
Disturbs the others						
Refuses to participate						
Encourages the others when things do not go as expected						
Criticises the others						
Is distracted from what he/she has to do						
Accepts group decisions without necessarily agreeing						

Assessing results and grading students

The individual's results in the final test serve as one of the grading criteria for the students. However, as the teacher, I also have to be aware of the working process in the groups and the ways in which they solve the problems inherent in the task of rope jumping. I have found it useful to introduce self and co-evaluation processes into the assessment so as to gauge students' social behaviour during group work. Therefore, the students are asked to complete a short questionnaire at the end of the learning unit in which they indicate their opinions about themselves and their group mates concerning social behaviours during the Cooperative Learning lessons. In my case, I used the questionnaire shown in figure 4. The questionnaire included four tables to be completed by the student (one for each group member, including him/herself).

The answers of each student, easily quantifiable, are compared with the answers of the rest of his/her group and used, with the notes I made as the teacher, to grade the student in relation to his/her social

achievement at work in learning teams. Finally, I informally interview each student briefly to explore his/her work during the lessons and the grade they finally earned. The interview concludes with the exploration of areas for improvement in future group works and a commitment to improve by the student.

Conclusion

Throughout this paper I have described, in detail, the process of implementing a Cooperative Learning structure called learning teams with elementary students with no previous experience of the approach. I have tried to show: (1) how to promote the minimum conditions necessary for students to cooperate, (2) to facilitate the actions and resources necessary for effective self-learning in groups, (3) to guide students' work in class through questions rather than answers and (4) to assess the results with the students. This paper presents a process for using the Cooperative Learning model and highlights student improvement and the promotion of individual and group practice that progressively allows new and greater motor and social achievements.

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