



## Little Ones Working Together



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This article offers guidance to early childhood educators on creating effective co-operative learning activities for preschoolers. It presents typical characteristics of young children that inhibit co-operation and those that facilitate it. It outlines the elements specific to implementing co-operative learning with young children, which accommodate these characteristics. It provides sample co-operative activities to promote children's oral language and social development in nursery and reception.

### Introduction

When you walk into Sandra Martin's nursery classroom, it is hard to find the adults. From the homemade map of the school on the wall, the children's buildings made from recycled cereal boxes, the dramatic play centre set up like a hairdressing salon, it looks like they might be learning about neighbourhoods. If you look carefully, you will see Sandra on the floor, asking children how they are going to build their 'town'. The teaching assistant is behind an easel, encouraging two children to share the paint and paper in painting their houses.

While at first glance this classroom might look like many other early years classes, the interactions that are going on in this classroom are somewhat different than most. Most of the activities are carefully designed to require the co-operation of two or three children. While in most early childhood classes there are opportunities for children to interact, they are rarely required to work together. What then happens is that the children with the most advanced social skills choose to work with others and those who have less well-developed skills work alone or in parallel play and don't develop their skills as well as those who engage in interaction. In Sandra Martin's class, children are encouraged and sometimes required to work together to complete tasks, practise skills, and learn new concepts.

This article begins with a description of typical characteristics of young children that inhibit co-operation and those that facilitate it. Then, it outlines the elements specific to implementing co-operative learning with young children, which accommodate for these characteristics. Next, the article provides guidance to educators in creating co-operative activities to promote children's oral language and social development in nursery and reception with sample activities that are specifically designed for young children.

The definition of co-operative learning used here is "activities designed so that two or more pupils must work actively together to complete the task". More than four decades of research into co-operative learning have shown it to be one of the most effective teaching strategies (Slavin, 1995; Slavin 2010). Yet, there is little research on the use of co-operative learning with preschool children (Tarim, 2004). There are however preschool programmes that have co-operative learning embedded in them (Chambers, 2009).

Two main elements of co-operative learning distinguish it from mere group work - positive interdependence and individual accountability (Abrami et al, 1995). Positive interdependence is the element that requires that group members actively work together. Teachers can create positive interdependence by structuring activities such that children need to share resources to complete the task, or dividing the task into sub-tasks and assigning each task to different group members.

Common problems in working co-operatively are some group members taking over and doing all of the work or the opposite problem of free riders doing none of the work. That's where individual accountability comes in - structuring the activities so that the contribution

of each group member is required. Examples of co-operative activities that include positive interdependence and individual accountability will be described at the end of the article after I discuss ways to foster co-operation in classrooms and explore the typical characteristics of young children that also need to be taken into account in designing co-operative learning.

## Fostering a Collaborative Classroom

Establishing an environment that fosters collaborative interaction can help co-operative learning succeed. It is important to begin with an inclusive, accepting atmosphere, one where children feel safe and secure. If the children are normally compared to one another and put into competition with each other, they are not likely to develop the trust that is necessary to co-operate as equals with their peers. You need to have an accepting attitude that embraces individual children at their own particular level. This will set a positive tone for the children to emulate.

One of the benefits of having children learn co-operatively is that it fosters an accepting ethos and helps with the integration of children of different ethnicities and children with disabilities. In fact, some early forms of co-operative learning were created to help improve race relations in the US after bussing children to integrated schools occurred in the 1970s. Having children interact on an equal basis enhances positive feelings about others who are different.

It is important to set up the physical environment in a way that fosters interaction between the children. Divide the space into inviting learning centres. In each centre include equipment and materials that enhance co-operation, such as blocks that are so big that it takes two children to carry them. Arrange the furniture so that interactions occur naturally. For example, set two chairs at the computer, rather than one. Select playground equipment that takes two children to operate, such as tandem tricycles.

Some activities typical of early childhood classes are already co-operative (collective murals). Having a group goal (creating a garden mural along one wall) that is a job too challenging for one child and sharing resources, such as glue pots and art supplies, creates the positive interdependence that make the activity truly co-operative.

Sometimes it is more efficient, and peaceful, for every child to have their own set of materials to complete a task. However, having children share glue pots and other materials and needing to work at resolving the differences that arise from having these limited resources is good practice in conflict resolution and communication. Of course, children must be taught effective ways of handling these situations and not be expected to have the necessary skills before they are required to use them.

Why don't early childhood educators simply use the same co-operative learning strategies that teachers of older children use? Well, young children are not just smaller versions of older children. Three- to five-year-olds possess developmental characteristics

**Table1.** Inhibiting and Facilitating Characteristics of Young Children (adapted from Chambers, Patten, Schaeff and Wilson Mau, 1996).

Inhibiting Characteristics	Facilitating Characteristics
• Egocentrism	• Curiosity
• Short attention span	• Need to socialise
• Immature social skills	• Less gender awareness
• Limited oral language skills	• Few inhibitions
• Inability to read	• Fewer preconceived ideas about school
• Inability to delay gratification	• Learn best with concrete materials
• Impulsivity	• Need to be active
• Need to be active	

that make engaging in co-operative learning both more challenging and easier than with primary school children. I describe some of these common characteristics below and the implications for designing co-operative learning activities for young children to accommodate these developmental characteristics. Table 1 provides a summary of typical characteristics of young children that inhibit and facilitate their ability to co-operate with one another.

## **Inhibiting Characteristics**

What is it about young children that can interfere with them being able to engage productively in co-operative activities? First, young children are generally fairly egocentric, seeing situations primarily from their own point-of-view. For a long time educators believed that young children are too egocentric to participate in co-operative learning. This is based on the Piagetian notion that young children cannot take the perspective of another person well enough to co-operate effectively. More recently, educators have adopted the perspective that a child who has attained a particular level of achievement can grasp concepts beyond his or her current level of functioning through co-operation with a more capable peer (Vygotsky, 1978; Vermette et al, 2004). However, participating in co-operative activities can actually help develop children's abilities to take another's perspective and increase their pro-social behaviour (Chambers, 1993). Engaging in co-operative learning provides opportunities for children to practice active listening, turn-taking, sharing, and helping each other. The implication of this limited ability to take another's perspective is that groups should be kept small. Pairs work best, especially for initial co-operative activities. This means the children just need to accommodate one other person's perspective at a time. It is good idea to assign children to their partnerships or small groups, rather than letting them choose with whom they will work. This avoids children being left out and ensures that children work with different children over time.

Along with young children's inability to see things from another person's perspective, comes immature social skills. Preschoolers need opportunities to practise their emerging social skills. This means pairing them with partners with different levels of social maturity. More socially mature children can serve as positive models for less mature children. Activities should be kept short and straightforward with clear goals and procedures. For example, an activity that requires some turn-taking would be fine, while one that calls for a group of children to come to consensus on choreographing a dance would probably be beyond their capabilities.

Young children have fairly short attention spans. This means that the activities need to be short. It is best to have them no more than five minutes to begin with, gradually increasing in time as children become more adept. Preschoolers are also just beginning to gain control over their impulses. Activities work best that have children up and moving together, rather than spending a long time sitting. Design activities that are relevant to the children's lives and interests and are fun to do.

Three- and four-year-olds have a high need for immediate gratification. They can't wait until the end of the week or month to see the results of their work. They may lose interest in projects that drag on too long. This means it is better to have a series of short co-operative activities rather than one long project.

Preschoolers have smaller vocabularies and more limited oral language skills than older children. Also, they generally can't read, certainly not well enough to follow written directions. These characteristics mean the activities need to be clearly defined with simple directions; keep them brief and keep the children active rather than spending a lot of time discussing topics. Using mixed ability groups is especially important as the less able children can learn the language and reasoning skills of their more mature peers.

## **Facilitating Characteristics**

The most helpful characteristics for co-operation that young children generally possess are their curiosity and their need to be active. Preschoolers like to explore and learn new things,

especially if the environment is a safe one, in which they feel secure. They learn a lot by talking about what they are doing and sharing their ideas (Department for Education and Skills, 2007). Many co-operative activities involve exploration and therefore appeal to young children. Because many co-operative activities require children to be actively involved in their learning, they correspond well to young children's need to be active.

Young children have fewer inhibitions than older children and fewer preconceived ideas about school. They are generally less self-conscious than adolescents and are usually keen to participate in co-operative activities. The younger they are, the less concerned they are about taking risks in front of their peers. After children have attended primary school for a few years, they can develop preconceived notions that schools means working quietly and individually. Fortunately, young children have not yet been socialised into a narrow conception of what school is like and are open to trying new and different activities.

Most children enjoy playing together, and co-operative activities that have them interacting with one another on an equal basis capitalise on this sociability. Young children also have less gender awareness, so they have less resistance to working with children of the opposite gender than do older children. This makes the use of mixed-gender pairs easier to implement.

Young children learn best through manipulation of concrete materials. This means having children actively engaged with real objects, rather than completing worksheets.

In summary, in order to accommodate the typical characteristic of young children, co-operative activities should:

- Involve small groups, usually pairs.
- Take a short time to complete, no more than five minutes to begin with.
- Have simple, clear, concise directions.
- Use concrete materials for the children to manipulate.
- Have the children actively engaged, up and moving about.
- Be relevant to the children's lives and interests.
- Be fun!

## Creating Co-operative Activities

In addition to the elements listed above, be sure to keep in mind the two key elements of effective co-operative learning for children of any age – positive interdependence and individual accountability.

### Positive interdependence

You can create positive interdependence in a number of ways. Often the easiest way is to simply change the goal of a game or activity from a competitive one to a co-operative one. For example, in the traditional game of musical chairs, children walk around a set of chairs (one less than the number of children) while music is playing. When the music stops everyone scrambles to sit on a chair and the child left without a seat is eliminated. Then, a chair is removed and play continues until there is only one child left – the winner. In Co-operative Musical Chairs, chairs are eliminated but children are not, so the goal is changed to fit all the children on one chair. This is a lot more fun as children end up sitting on each other's knees and holding onto each other to avoid tumbling over.

One common type of positive interdependence is resource interdependence, in which children share equipment or materials to complete a task. Take the typical painting activity where children usually paint their own picture at an easel. Turn this around by having two children share the paper. Give each child one pot of paint and one brush and have them work together to create a joint picture. If they each want to have a picture to take home then ask them if they want to paint two pictures or cut the first one they made in two.

### Task interdependence

Task interdependence means dividing up the activity so that each child is responsible for

completing part of it. For example, if you have a number of objects that you want a pair of children to sort, you can have one child collect all the yellow objects and another collect all the red ones.

### **Role interdependence**

In role interdependence, each child has a particular job to do in order to complete the task. Examples of role interdependence include being a recorder, a reporter, a checker, or a materials manager. Which ones you assign will depend on the task to be completed. If you are having pairs of children count how many buttons are on their clothes, one child could be the recorder and write down the number and the other could be the reporter and tell the class how many buttons they had.

### **Outside force interdependence**

For outside force interdependence, you need to have something outside the group that they must overcome to complete the task. Sometimes the outside force is a common foe or adversary, as in the big, bad wolf. Or, it could be a time constraint, where each partner has to finish cleaning up their activity before a timer buzzes.

### **Reward interdependence**

In reward interdependence, each group member receives the same reward when the group achieves its goal. For example, both partners might get to play a favourite game when they finish completing a challenging puzzle together. It is rare that you need to use reward interdependence with co-operative learning as the tasks themselves are usually engaging enough that children are intrinsically interested in doing them. Reward interdependence should only be used when children might not be motivated to complete the task, such as tidying up after an activity.

### **Individual accountability**

Some of the problems that arise in group work, such as one person doing all of the work or one person doing none can usually be avoided by structuring individual accountability. This means structuring the task so that all group members are responsible to their group for their own learning and for helping other group members learn as well (Abrami et al, 1995).

Occasionally there are reluctant participants who are not willing to work with others at all. This can happen if children are not interested in the task, if the task is too difficult, or if they perceive that their participation is not necessary. Usually this can be avoided if you design interesting, relevant, and developmentally appropriate tasks that require everyone's participation. To do this, make the contribution of each partner or group member clear and visible. For example, when groups of three are making a joint picture, give each child a different coloured marker that only he or she can use, and make it clear that the finished product must include all three colours.

If you create interesting activities that are challenging yet attainable for the children, then formally structuring individual accountability is not always necessary. However, if there are children in the class who often take over or refuse to participate in your interactive activities, then structuring individual accountability is advised.

Taking time with the children after each activity to reflect on how they worked together helps children learn how to co-operate effectively. Teaching them to share with their partners or group members how they felt about doing the activity together can be a very powerful way of enhancing their social skills.

## **Summary**

In this article I described how young children differ from older children in ways that facilitate and inhibit their ability to engage in co-operative learning. I outlined the ways in which you can structure co-operative activities to enable the developmental characteristics that interfere with productive interaction and build on those that enhance it. Two elements are

described, positive interdependence and individual accountability, which are key to effective co-operative learning and provided examples of how to structure them. Creating activities for young children that include these features should ensure that they will learn both socially and academically.

## The Author

Professor Chambers is Director of the Institute for Effective Education at the University of York and Professor of Education at the Centre for Research and Reform at Johns Hopkins University, USA. She develops and evaluates effective practices in early childhood and literacy education and promotes the use of evidence-based practices. She has authored or co-authored numerous articles, books, and practical guides for teachers, including *Classroom Connections: Understanding and Using Cooperative Learning* and *Let's Cooperate*.

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