Chapter 7
Managing Equipment, Space and Time

Probing Questions

1. Why are protocols particularly important when working with children in an outdoor setting?

2. What are some effective strategies for you use for organizing children into pairs, groups or teams that might be effective in an activity setting?

3. What do you see as the major differences between classroom work and physical education lessons with reference to equipment?

4. How might the concept of learning centers be used in physical education?

Elementary school classrooms are of their very nature, dynamic places. When we think of dynamic, we can think of three key terms coined by Kounin (1970) to help explain this concept. The first is multidimensionality, and by this we understand that in any classroom, many events can occur. Second is the concept of simultaneity, in that many of these events can be occurring at the same time. Third, these combinations of multidimensionality and simultaneity both serve to make classroom events very unpredictable. The teacher needs to attend to all of these events in order to ensure a well-managed classroom.

Take for example, the following scenario from Ms. Brown’s class:

Most of the children are completing a seatwork mathematics task, others are talking or distracting each other, while another child at the back of the room has his hand up wanting to ask a question. Still more children are at the book cupboard, searching for a resource material for their upcoming social studies project.

For lessons to run smoothly, Ms. Brown will need to first be able to monitor all these classroom events, and then she will need to decide which of these should take priority. Is it the child with his hand up, or the students who are off-task?
Irrespective of the content of the lesson, be it seated work solving math problems or reading in small groups, or a more busy action such as completing art projects, the one variable present in physical education that is not so visible inside the classroom is deliberate physical movement. Sure, children move from point to point within a class as individuals or in groups, but the every essence of physical education is movement. We purposely want children to move. For them, moving is learning.

Another dimension that signifies a difference between the management of physical education lessons and classroom work is that during physical education, children will be manipulating implements such as bats, racquets, and a variety of balls. In some cases, these implements are projected over large spaces, such as in throwing, punting or striking tasks. As children in the same grade level have significant differences in their ability to control these objects, this poses a significant challenge to the teacher.

Finally, a significant difference between managing students in the classroom and outdoors is that of the work area itself. Physical education work areas are significantly larger than the classroom. While this extra space offers many advantages, in that it allows children to work in a safe open area, it does pose problems for teachers in terms of their communication with the children. It can certainly take longer to gather children for the purposes of giving instructions. Even with regard to signals for stopping and starting work, the extra size of a physical education work area creates problems specific to teaching physical education. Noise and other distractions also serve to present teachers with interesting challenges. Physical educators have many stories about how a fire truck, ambulance or helicopter totally captured students’ attention, and left them talking to no one but themselves.

This chapter will examine the key issues of managing equipment, space and time, with the aim of presenting you with some strategies to minimize management time and maximize instruction time. It is important to note that similar to the classroom setting, the managerial routines presented in the chapter must be taught and practiced in the first few weeks of the year if teachers expect students to achieve these behaviors in a timely manner.
Managing equipment

One of the unique issues facing teachers of physical education is managing and organizing equipment. Bats and balls are significantly bigger than pencils and books, and they are used in much more forceful ways. Our first consideration when dealing with equipment is that of safety, and you need to present children with protocols for the safe use of equipment. Some specific rules as relating to equipment are presented in Box 7-1.

Box 7-1 Rules relating to equipment

- Quickly scan the target areas for others before you start the task
- Use equipment responsibly and with respect
- Unless stated, leave equipment where you found it
- Walk when you have equipment in your hand

Transporting Equipment

One of the greatest utilities you can use when transporting equipment from the classroom to the play area is a shopping cart. Carts can carry a lot of equipment, they are relatively easy to maneuver, and provide a central point for having students retrieve and put away equipment.

When the activity requires that a lot of equipment needs to be transported to the work area, or when areas need to be set up for game play, you might consider including students as “equipment managers.” Used often in the Sport Education curriculum model (see chapter 10), equipment managers are students who have responsibilities for collecting and returning specific pieces of equipment (e.g., hockey sticks, pucks, and team pinnies) and taking them to the work area in which the lesson will be completed. In this way, only a few students are gathered in the equipment area at any one time.

Equipment managers can be used in two ways. The first occurs especially when students are in teams, and each player in that team has a team role. The equipment manager is responsible for collecting all the equipment needed by his or her team at the beginning of a lesson. In the meantime, that team’s warm-up leader is taking the rest of the team through a series of exercises in preparation for play.

The second way to use students as equipment managers is to have each student allocated to a particular equipment group, such as the “blue team,” “gold team,” “red team,” and “green team.” The blue team might be responsible for collecting the lacrosse
sticks, the gold team the balls, the red team the goals, and the green team all the pinnies, whistles and score sheets. Again, for this system to run smoothly, you will need to train the students the specific responsibilities associated with these roles, such as where to put the equipment on arrival at the work area, and how to replace it in storage once the lesson has finished. Further, if you are able to have the various pieces of equipment in separate containers (e.g., carts, bags, or baskets) considerable time will be saved.

**Distributing Equipment to Children**

Once we have established appropriate ways to use the equipment, our next challenge is to have students receive equipment in ways that minimize the time taken. No task can take longer in physical education than you handing out equipment to children, student by student. We need to devise ways in which children can receive their equipment quickly and efficiently so that we can spend most of our lesson time practicing skills.

There are a number of strategies for having children get their equipment and begin working. The first is to have the equipment spread out across the work area, rather than having it in one central place.

That is, if the children are to be working with beanbags, you can place the beanbags in separate piles around the room. The instruction then is simply as follows: “Girls and boys, as you look around the room you will see a number of hoops with beanbags in them. When I say “go” I want you to walk to the hoop closest to you, get a beanbag, and begin tossing and catching it with one hand.”

When children are working in pairs and are required to collect different pieces of equipment, you may find it helpful to have the children first select one of two paired names. For example, at the beginning of the lesson, when students are first placed in pairs, ask each student to become either an apple or an orange. These names can be used later when distributing equipment.

“I want the “orange” person to collect a scoop from out of the bin, while the “apple” person comes over to me and gets a ball. When you are both back at your work area you may begin rolling ground balls to your partner. Remember our cue is to have the scoop all the way on the ground so you are going to have to bend your knees.”

By using paired names such as apples and oranges, we can allocate tasks to students that require them to do different things. It is also helpful in the instructional
phase as well, where we might ask the apple to complete one task while the orange
does another, such as in the example above.

**Replacing and Returning Equipment**
In addition to the distribution of equipment, the return of equipment also requires
specific protocols. If we simply ask students to return their beanbags to the hoop, or
their balls to the bin, we will often see students running towards the container and
tossing the ball as though it is a target. The result is the equipment becoming more
scattered than it originally was. Nothing is more motivating to a fourth grader than
trying to toss a ball back into the bucket from which they took it. The word “place” is
very handy here. It infers putting the equipment in the container, rather than tossing.
Many physical education teachers spend considerable time at the beginning of the year
practicing this protocol.

As with the “apples and oranges” system used to distribute equipment, you might
use similar strategies for equipment return. Even if every child has only a ball, it is helpful
to ask different groups to return materials at different times.
“I’d like those with blue t-shirts to bring your Frisbees to the basket
and place them in carefully……Now those with red t-shirts…….
Anyone else can now bring his or her Frisbee.”

**Managing space**
We made mention in the introduction to this chapter that physical education
lessons typically take place in spaces larger than the classroom. It is essential then, that
we teach children to work not only within the designated space, but also in ways that
promote safety as well as their own learning. The concepts of personal and general
space are critical to this mission.

**Placing Students into Personal Space and General Space**
All children need to understand the concepts of personal space and general space.
It is only after an understanding of these concepts has been developed that we can allow
students to begin working independently. Those of you who teach at the kindergarten
and first grade levels in particular will need to help children explore these concepts.

By definition, **personal space** is all the space that you can take up without moving
from a particular point.
By using a hoop to represent their house, and explaining that only they and no one else is allowed in their house, you can ask the children to explore all the space in their house, by bending, stretching, twisting and turning. All the space they can touch is their personal space. Another way children learn the idea of personal space is to tell them to make an invisible bubble around them. “Be careful not to touch anything or anybody or your bubble will burst.” Using this example shows the children that when their bubble bursts, they are no longer in personal space.

**General space** is the area in which the entire class is working. General space nearly always has boundaries, be they the natural ones formed by walls or fences, or artificial ones that are defined by marker cones.

Children need practice at moving in general space without bumping into each other, and they also need to be able to move into self-space when called upon to. Box 7-2 gives some examples from throwing and catching that stress the concepts of personal and general space.

**Box 7-2. Moving in personal space and in general space**

**Kindergarten**
When I say go, I want you to sit in your personal space facing a partner. You are going to roll the ball to your partner in a straight line, and reach out to catch it. When you are facing your partner, make sure that you are not in anyone else’s personal space.

**Second grade**
I want you to throw your beanbag in the air and catch it at various places around your body. Try to catch it above your head, out to the side, or at a low level below your knees. The challenge is to toss the beanbag so that you don’t have to move out of your personal space to catch it. So don’t throw it so high that it goes well way from you, but toss it high enough so that it gives you a good challenge.

**Fourth grade**
I want you to experiment with different ways to throw a Frisbee to a partner who is moving. The challenge is for the thrower to lead the receiver so that the Frisbee is
arriving at the same place as the partner at the same time. You need to be aware that you are moving in general space, and so might other pairs. Be careful when you throw that you don’t move into the space of another group’s throws. It is the responsibility of the thrower to toss to an open spot, not run your partner into another group.

Using Stations as a Way to Manage Space

Physical education teachers work areas often differ in size. Thus, finding a way to utilize all the space available for instruction becomes an important task for teachers. Using stations is one way to use space effectively. A lesson that uses stations will see children rotating from one learning task to another in a systematic fashion throughout the lesson. This rapid progression through a series of tasks appears to be particularly effective with children who often lose interest quickly and whose attention spans are short.

Similar to learning centers in the classroom, where students can work independently or in a small group on a particular content area such as science, reading, or math, stations in physical education allow students to work on a specific skill or common theme such as catching, or a variety of unrelated skill stations such as dribbling, volleying, striking, and throwing.

Advantages of Stations

There are several advantages of using stations. First, they allow for maximum participation for each child. The design of stations generally allows enough equipment for every child to work with at each station. This is because each station will use different equipment (see figure 7-5 for an example from gymnastics).

Second, stations foster heterogeneous grouping. Students learn to work with children that they might not have partnered with or who are different from their normal “friends.” Last, stations allow the student to individualize instruction. Teachers should have multiple levels of the task at each station to accommodate the different abilities levels in the class.

Designing Stations

When designing station work attention must be given to:
  o defining the space for each activity or station
  o determining equipment availability
  o deciding how children will be grouped
  o determining how children will rotate (i.e., if teacher directed) from station to station.

  o Defining Station Areas

  The first task in designing a lesson that incorporates stations is to define the area of each station. We encourage you to define the station area by using cones or lines of the floor to delineate working space. This separates the working environment for the children and helps them to continue working in a specific area.
Figure 7-5. Sample Balancing Stations
In outdoors lessons that use a hard surface, you can use playground chalk to define the station areas, and draw arrows to indicate the rotation between these stations. Still in other cases, the facilities themselves will designate the station location. For example, the basketball goals might be the site of two different stations, and hoops on strung on a fence might indicate others.

Using cones of different colors also helps students identify the station at which they are currently working, but also helps in the transition between stations. For older children, you might use a numbering system in which the students have a personal station record card on which they can note down their score.

○ **Equipping Station Areas**

The number of stations you chose for inclusion in a lesson will depend upon the length of time you the children to spend at each station, the number of children in your class, and significantly, the amount of equipment you have available. The challenge is to try to have enough equipment at a station so that each child will be actively engaged throughout the entire time they spend at that station. That is, you need to have three balls at a station that requires three children to dribble in their own personal space.

In some cases you will not have sufficient equipment to have all children working with the same apparatus. The use of the station format is of great benefit here. In the case of a lesson that focuses on striking, one station might use paddles and foam balls, another may include badminton racquets and birdies, while other the other stations might use golf clubs and softball bats. Nonetheless, it is critical that students have a piece of equipment for their own use.

○ **Grouping Children at Stations**

As previously mentioned, the number of children at each station will depend upon primarily the amount of equipment you have available, which, in turn, defines the number of stations you incorporate. Nevertheless, it is preferable that each station involves only a small number of students. By small, we mean two or three students where possible, although for some fitness stations, as many as five or six students might be working concurrently. What is important, however, is to distribute the children evenly throughout the stations, and while exactly the same number is not required at each station, it is desirable.

○ **Using task cards**

One of the most difficult aspects of using stations is communicating to students the task requirements for each station. Because time is always a critical factor in physical education, figuring out how to get every student knowledgeable about the task and going quickly is difficult. To make efficient use of time, you need to ensure that tasks are very simple and easily remembered.

To speed up this process, some teachers use task cards, posters, or class handouts to provide descriptions and directions for the various tasks. Regardless of the method for communicating information, directions must be simple and clear such as
“Volley the ball to the wall continuously. Count how many times you can volley in a row.” For younger children or for children who have difficulty reading, keep the directions brief. Using pictures or diagrams of the task is especially beneficial (see Figure 7-6).

Dribble and zig zag around the cones.

DRIBBLE THE BASKETBALL FOR THREE MINUTES

Figure 7-6. Sample Task Cards

The progression for children at each new station thus follows a consistent routine:

- read the card
- look at the picture or diagram
- begin to practice the task
Rotating Students Between Stations

Students will usually rotate between the stations on a teacher command or after a certain time period. For younger children, we suggest you have them point to the next station they are to rotate to as a way of ensuring they know where they are to be going when they transition between stations.

Another option for station rotation is to teach children how to “flow” between stations. This involves teaching children to change stations when they are ready and not on some predetermined schedule. Many teachers feel uncomfortable giving up this type of control of their class. However, we find that even with young children they can be taught how to transition from station to station responsibly. This practice seems to have a motivating affect on children and their participation.

When to Avoid Stations

We would not suggest the use of stations if the teacher is introducing a new skill. Stations are work best when the students know the tasks and can practice them without long teacher explanations. Thus, using stations as a review or a way to revisit themes is particularly effective. In addition, it is important when planning stations that the tasks all require about the same amount of time to complete. If one station requires children to do a task for a certain number of trails and another has the children using
time then children will finish at different rates which could lead to off-task behavior while students are waiting to transition.

Managing time

Time is a critical commodity within physical education. We need to make every effort so that the time allocated to the content is taken up with student practice and learning, not in class management. Perhaps the greatest loss of time in physical education is the time taken in making the transitions from one activity to another. Many teachers talk far too much, while others have ineffective protocols for stopping and starting work, and the gaining of students’ attention.

To best serve us in maximizing practice time through the reduction of time it takes to gain and keep children’s attention, we suggest that teachers create and practice with children a series of class protocols. This section provides details of three time management protocols commonly used in physical education. These are (i) stopping work and gaining attention, (ii) beginning or resuming work and (iii) gathering. In addition, there is a discussion of how we can increase activity time from the moment a lesson begins through the use of a protocol we call an “instant activity.”

Protocols for Stopping and Gaining Attention

One of the most important protocols in teaching physical education is the signal that tells students to stop work and give attention to the teacher. Some teachers choose to use a whistle for gaining children’s attention, and while a whistle can be useful when working in large areas, it tends to become a little repressive when used in a smaller space. While the most commonly used verbal command for stopping and gaining attention is “freeze,” you might instead use a handclap, the beat of a drum or the stopping of music. You may also simply choose to raise a hand and have all the children raise theirs as an indication they have noticed.

When giving a signal for attention, we also need to include information in the protocol that tells students what to do with their equipment. Children of all ages, not just those in the early grades, have difficulty holding equipment still during a time they should be attending to the teacher. It is not only first graders who will want to toss a beanbag or dribble a ball after the teacher has asked them to stop, older students are notorious fiddlers as well.

There are a number of strategies that teachers use, and you will find the one that suits you best. Strategies can include

- asking children to place their equipment on the floor in front of them
- asking students to place their equipment against a body part (for example, “put your foot on the rope” or “place the balloon on your belly and your paddle on your hip.”)
- asking students to put the equipment down and take two steps back
Some teachers use a countdown sequence to include all aspects of getting attention, stopping work, and dealing equipment. The concept of “Give me 5” progresses in the following sequence:

1. Stop
2. Eyes on the teacher
3. Be quiet and still
4. Have your hands free (not touching anybody or anything)
5. Ready to listen

(Included with permission from PE Central: pecentral.com/lessonideas/ViewLesson.asp?ID=871)

While this sequence might seem overly complex or burdensome, remember that after practice, all that is needed is the command “Give me 5.”

Protocols for Resuming Work

While “go” or “begin” might seem enough of a signal to students to recommence work, it is not unusual to see children begin an activity while the teacher is still presenting the task. For instance, if you want students to throw and catch a ball in pairs, you will often see students begin this task before you have finished giving the explanation. The most common strategy used here is to preface any instruction by the phrase “when I say go.” It is also helpful if you (i) present the task, (ii) ask students to organize themselves, and then (iii) in addition to the go signal, ask them to show you that they are ready. Box 7-3 gives a specific verbal example.

Box 7-3. Signal for Beginning a Task

“When I say go, you are going to try to throw the ball through a hoop. One partner will be on one side tossing underhand, while the other will be opposite and throwing overhand. See if you can get 5 through the hoop each without missing. Now go and line up opposite a hoop and show me that you are ready.”

** Recall --- Only when students are ready in their pair does the teacher give the signal to “go.”

An alternate of the “go” strategy is to include the phrase “when I say start practicing.” Both of these are simple, clearly understood, and help preface the task.

Signal for Gathering

As children will often be working in a large general space within physical education, and following a signal for stopping and gaining attention, the teacher may wish to have a visual signal to indicate to children to gather together around him. The teacher you see in Figure 7-9 is using a lasso motion to indicate to children to move in quickly to
wherever she is. By circling the imaginary lasso, she is mimicking the act of gathering all the children and bringing them in for the next set of instructions or a new demonstration.

Figure 7-9. Signal for Gathering

Final words

Given we have such little time in physical education, we want to make best use of the time we have. As shown in Figure 7-10, our challenge is maximize activity time and minimize the time we allocate to transitions, organizing equipment and moving into space. In this way, children are afforded more opportunities to practice their skills, development fitness and learn to solve movement problems.

Figure 7-10. Model of Preferred Time Allocation in Physical Education
Over to you...

1. What are the advantages and disadvantages of every student having a piece of equipment?

2. Which management protocol do you think will be the most difficult for you to instigate during physical education lessons?

3. How comfortably do the protocols we have listed in this chapter fit with the protocols you use in your own classroom? Will there be many that you can transfer directly from one setting to the other?

4. Some teachers paint large spots on their playground to use as personal space markers for the beginning of lessons. How might you use such a system in a work area that you cannot paint (e.g. a grassed field or an indoor carpet area)?
Portfolio Tasks. . .

1. You are planning a task that focuses on catching a softball using a glove. One student will be tossing soft throws to a partner. Draw a plan of how you would place the various pieces of equipment around the work area, and where you would place students. Plan also for the specific verbal directions you would use to have the children collect the equipment and begin working.

2. You are completing a unit on throwing and catching for fourth grade students. You have available the following set of equipment:
   - 4 Frisbees
   - 4 tennis balls
   - 4 softballs
   - 4 softball gloves
   - 1 large wall
   - 6 hoops

   Design a series of stations that would involve a class of 24 students. In this plan, include the following details:
   - number of stations
   - a task for each station
   - number of children per station
   - time spent at each station
   - rotation system
   - directions for placing students at the initial station

3. Browse through the catalogues of one or two sports equipment suppliers. You are able to purchase three items from the catalogues for the purpose of equipment storage or transport. You are also limited to spending only $150. Justify your choices.

References

Glossary

**Equipment managers.** Students who have responsibilities for collecting and returning specific pieces of equipment to and from the work area in which the lesson will be completed.

**Personal space.** All the space that you can take up without moving from a particular point.

**General space.** The area in which the entire class is working.

**Stations.** An instructional strategy in which children rotate from one learning task to another in a systematic fashion throughout a lesson.