# Chapter 3
The Developmental Perspective in Teaching Elementary Physical Education

Probing Questions

1. What role do games such as Duck, Duck, Goose and Steal the Bacon have in an elementary physical education program? Is this reflective of the content of elementary physical education?

2. What are some of the ways that children learn motor skills?

3. Is there a certain progression that students go through in learning motor skills? What would this progression look like?

4. What do you think is meant by the following statement "motor development is age related but not age dependent?"
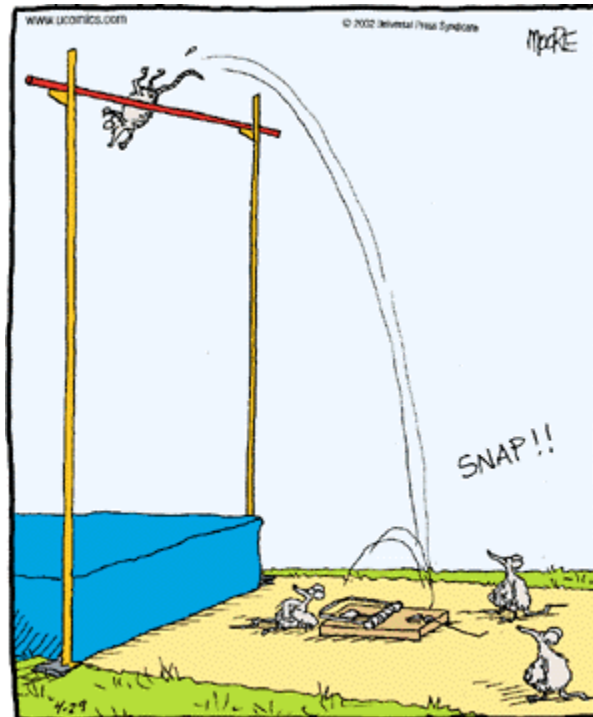
Classrooms are much different today than they were in the pioneer days. In the early days it was common practice to have one-room school houses filled with children of all ages and grade levels taught by the same teacher. One of the best depictions of this practice comes from the television series, "Little House On the Prairie." Often they aired episodes that detailed the trials and tribulations of Laura Ingles as she attended school in the tiny community of Walnut Grove with her older sister Mary. The interesting thing in most of these episodes was that the teacher "Miss Beatle" seemed to orchestrate lessons that met the differing needs of all the students in her classroom.

Although classroom structure is typically different today, in that most classrooms are filled with children around the same age, they are still reflective of the one room schoolhouse mentality. That is, all children regardless of where they are developmentally should be provided learning experiences that meet their individual level of readiness.

Developmental Perspective

Have you ever watched a group of children learning to jump rope? It is interesting to see how some children use a mature rhythmic jumping pattern while others look awkward as they try to coordinate the turning and jumping skills needed to jump rope

smoothly. One notion that you must constantly remind yourself of as you are teaching children motor skills is that there will always be **intraskill variability** as well as **interskill variability** in student performance. These terms describe how children vary in performance on the same skill such as striking (intraskill) and how they vary in performance on different skills such as striking verse kicking (interskill). Thus, from a teacher's perspective, these terms help explain how some students are able to do some tasks or skills well while others struggle. For example, in teaching first graders to kick a ball against the wall some students will easily contact the ball at the proper contact point behind the ball while others will look clumsy as their foot sails over the top of the ball or their foot hits the ground prior to contacting the ball. Therefore, it would be appropriate practice to have tasks designed for the differing levels of ability within a class.

To put this concept in terms of elementary education teachers, this would be similar to placing students in separate reading groups or math groups. The key is that the composition of children in these groups would most likely be different. That is, not all children in the advanced reading group will be in the advanced math group. So, intraskill and interskill variability are the equivalent to having various reading and math groups in your classroom. You will no doubt see a tremendous amount of variability when teaching children motor skills as you would if you were teaching them reading, writing, or mathematics. It is subsequently important to understand that the developmental process is reflective of the one-room schoolhouse and that designing homogeneous tasks for all children would be inappropriate.

Developmental Considerations in Teaching Motor Skills

The good news is that while children develop at their own biological and maturational rate, they typically follow similar motor skill progressions though the rate of progress varies. The observable change in the patterns of performance is often referred to as **motor development**. It is defined as the quantitative and qualitative changes in children as they move to more complex versions of physical skills throughout the lifespan (Haywood & Getchell, 2001). These changes are age and experience *related* but not age and experience *dependent* (Barrett, Williams, & Whitall, 1992). In essence, there is a fixed order of progression in that the sequence does not change, but the timing may vary from individual to individual. Figure 3-1 shows one example of this progression.
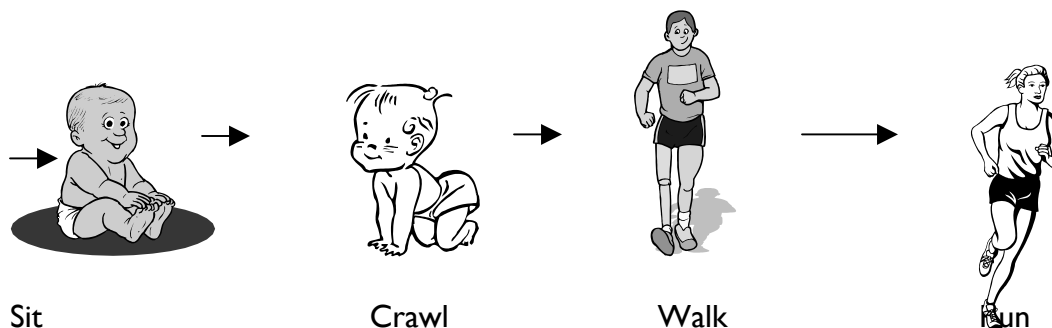

| Sit | Crawl | Walk | Run |

Figure 3-1. Progression of Locomotion

It is helpful to think of development as occurring on a continuum in that change is ordered and sequential with students at different places along the continuum. Thus, the following are critical assumptions about development and are important to consider when creating learning experiences that are appropriate for children.

Readiness

Children learn when they are ready and are motivated. It sounds innocuous, but understanding that children determine when they are ready to acquire a new skill is critical to not forcing children to try things before they are equipped both physically (e.g., strength and endurance) and psychologically (i.e., the learner's state of mind). Children's attitudes toward learning a new task or skill will affect their acquisition of that skill. So, you have to be aware that even though a child might have the requisite strength to perform a task such as crossing the parallel bars, they might not be psychologically ready to perform the skill. They may fear falling, or they may not be sure how to take one hand off the bar and replace it in order to move forward.

It is important for you to realize that if a child is not performing a task or skill correctly the task may be inappropriate for the child's developmental level. Therefore, a variety of tasks that can be modified in the instructional context should be provided so that all students are given the opportunity to work at their own individual level. The use of intratask variation or teaching by invitation discussed in Chapter 5 are two instructional strategies that enable children to work at a level they perceive as appropriate for themselves.

Sequential

Motor development is sequential and orderly, advancing from simple to complex versions of a skill (Haywood & Getchell, 2001). In light of that, there are two predictable sequences of development. They are **cephalocaudal** and **proximodistal** development. Cephalocaudal development refers to the idea that the progression occurs from head to the feet. This sequence is evident when you observe infants and you notice that they can control the upper body (e.g., sitting) before the feet (e.g., walking). Proximodistal development describes growth that occurs from the trunk or midline out to the extremities. This sequence is evident in the fact that children can throw before they can write. Thus, from a motor skill perspective, children will learn to run before they learn to skip and they will be more likely to learn to catch before they learn to climb. You should remember that careful sequencing of learning tasks contributes to the success of children and that success rate has been linked to student achievement.

Cumulative

Children learn by scaffolding or layering. The general belief is that children gradually build upon or incorporate previously learned skills to facilitate future performance. Your instructional tasks should therefore be presented in a progressive and sequential order. For example, children need to be able to kick a stationary ball before they can kick a ball that is moving. Likewise, they have to be able to toss a ball correctly before they can learn to serve in tennis.
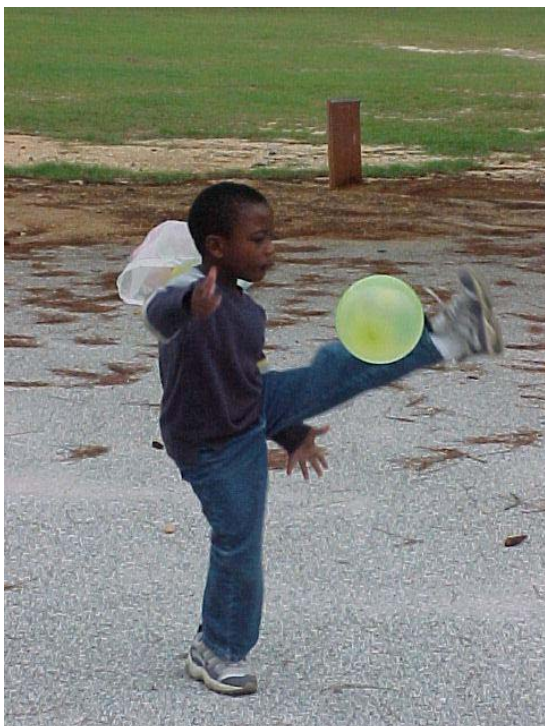
This helps children establish a solid foundation that they can draw upon when attempting to acquire more complex versions of skills. The complexity of a task is affected by the environmental conditions and children should be provided with meaningful challenges to promote skill development.

Directional

Sometimes children will change the way in which they perform a skill. From a developmental perspective, a change in pattern (whether the change is an improvement or a decline) is neither right nor wrong. Developmentalists tell us that there can be a variety of reasons for changes in motor performance. These can include a growth spurt, a lack of practice, or an injury (NASPE, 1994). Children are recognized for what they can do at a given time. Thus, the goal from the developmental perspective is to provide experiences that will enable children to advance performance gains and move toward more mature versions of the skill when they are ready.

Figure 3-2. Children Learn by Scaffolding

Developmentally Appropriate Practices

As was discussed in Chapter 1, the underlying premise of many physical education programs is to guide children in becoming physically active for a lifetime. In order to achieve this goal, children need to experience a quality physical education programs. Quality physical education programs are both developmentally and instructionally appropriate for the children being served. The Council on Physical Education for Children (COPEC, 2000) describes appropriate practices as those that recognize children's development and changing movement abilities.

> Children's past psychomotor, cognitive, and affective experiences are also recognized and accommodated in developmentally appropriate instruction. A variety of individual characteristics such as developmental status, fitness and skill levels, body size, and age are considered in designing lessons and selecting instructional strategies (p. 4).

Appropriate instruction in physical education incorporates best practice derived through research and experience to maximize success and learning for children (COPEC, 2000). Children who participate in a comprehensive quality physical education program should exhibit the characteristics of a "Physically Educated Person" (see Box 3-1)

Box 3-1. Characteristics of a Physically Educated Person
A physically educated person:
- *has* learned skills necessary to perform a variety of physical activities
- *is* physically fit
- *does* participate regularly in physical activity
- *knows* the implications of and the benefits from involvement in physical activities
- *values* physical activity and its contribution to a healthful lifestyle.
(NASPE, 1995)

As a teacher, you must ask yourself, what types of instructional tasks and activities will help me reach the goal of producing a physically educated person? In order to design tasks that meet the needs of the individual learner, you must be cognizant of a student's skill level, prior experience, and developmental status. Therefore, during a lesson, you need to make sure students have ample practice opportunities that are appropriate to their skill level, there are a variety of challenges within a lesson, and the tasks are meaningful.

Figure 3-3. Students Need Ample Time to Practice

One component of developmentally appropriate practice that has been intricately tied to learning is success rate. It has been suggested that for students to continue to practice tasks, they should be engaged at a high rate of success at least 80% of the time. This rate of success is believed to keep children in a state of "flow" (Csikszentmihalyi, 1975). In a state of flow, children participate diligently because they do not become bored with the task but stay challenged and motivated to meet task demands. Yet, Rink (2001) contends that it is shortsighted to specify a success rate. She suggests that in physical education the demands of the task would affect the rate of success, and therefore success rates should vary. For example, if you have children kick a ball at a

stationary target, an expected success rate at or near 80 percent would be acceptable. However, if you have a child batting from a live pitch, then the expected rate of success would be lower After all, a professional baseball player batting at an average of around 30 percent success is considered a very good hitter.

Motor Skill Development

The wonderful thing about learning motor skills is that there is usually something for everyone in the physical activity spectrum. That is, you may find that you are not a very good softball or baseball player but you are a great calf roper. Both activities require using the fundamental motor skill of throwing but not in the same context or manner. The elementary school physical education experience is designed to help children acquire the fundamental skills that can be used in a variety of sport or physical activities. The key is children must have

Figure 3-4. Success Rates are Critical to Motivation

quality instruction using appropriate skill progressions so they can develop mature patterns of a variety of skills. Once children possess a number of skills, they have a greater opportunity to use these skills in sports or physical activities that are of most interest to them.

As we have stated, children differ in their rate of development for learning motor skills. Graham, Holt-Hale, & Parker (2004) use the phrase "Generic Levels of Skill Proficiency" (GLSP) to describe the different stages children pass though as they learn motor skills. The GLSP has four levels: precontrol, control, utilization, and proficiency (See Box 3-2).

Box 3.2. Description of characteristics of GLSP
- Precontrol - clumsy or awkward movements, cannot repeat movements and success is by chance
- Control - need intense concentration but being able to replicate movement, can perform skill but doesn't look smooth
- Utilization - skill is becoming automatic with a smooth quality and can start to attend to environmental demands.
- Proficiency - skill performed automatically with ease and attention is placed on external stimuli

---

The term "Generic" is used to explain how children can be at different levels for different skills. For example, a student may be at the precontrol level for kicking but at the utilization level for balancing. Thus, the categories provide the teacher with an idea of what the students can do at a particular level. More specifically, the categories describe how a child looks when performing a skill and address how the context in which the skill is practiced may vary.

To fully understand these categories and how they represent the progression of skill development, let's examine the skill of driving. We would expect that most of you would consider yourselves pretty proficient drivers if the car had an automatic transmission. Proficient drivers no longer have to think about how to keep the car between the lines or that when they turn on the correct blinker it seems to happen automatically. They seem to find multitasking (i.e., listening to the radio, talking on a cell phone, or talking with passengers in the car) while driving easy and that the car almost drives itself. On the other hand, if you never learned to drive a car with a standard (stick shift) transmission, you would easily find yourself back at the precontrol level for driving. You would have a hard time starting the car and changing gears. Suddenly, you would find yourself having to attend to the mechanics of driving again like pushing in the clutch with the left foot and letting off the gas with the right foot. Thus, the skill of driving would require more cognitive attention than you had given it in the past because you would be at a beginning level in skill progression. Nonetheless, with sufficient practice you would find yourself being able to drink that cup of coffee as you drive down the road oblivious to the mechanics of driving once again.

We believe it is critical that elementary education majors possess a rudimentary understanding of how to analyze motor skills in order to plan more appropriate practice tasks for children. This analysis includes examining various factors that influence the learning of motor skills since they contribute to task difficulty, thus affecting the skill performance.

Factors Influencing the Learning of Motor Skills
The learning of motor skills is particularly influenced by the classification of the skill to be acquired. It is helpful to know that most skills are generally classified on a continuum and can be categorized in a variety of ways. Thus, when you examine motor skills you can look at them with regard to the environmental demands, the initiation of movement by the performer, or the beginning and ending points of the movement. Understanding how these factors influence the learning of motor skills, will be extremely helpful when teaching children and designing practice tasks.

Environmental Demands
The classification of skills as to whether they are considered closed or open is based on the nature of the environment. A **closed skill** is performed in an environment that is stable and predictable, whereas, an **open skill** is performed in an environment that is changing or unpredictable. The term environment is very broad and general and does not provide a very clear picture of what is to be investigated. Thus, we believe that

you can gain some idea of environmental demands by looking at the predictability of the environment in one of three ways:

Table 3-1. Closed verses Open skills

Classification of Skill	Environmental Conditions	Examples
Closed	No movement of objects No opponents or teammates Slow speed or stationary	Striking a stationary object like a ball off a tee Throwing a ball at a target on the wall Shooting a free throw in basketball Jumping over a stationary rope Shooting an arrow at a still target
Open	Movement of objects Opponents and teammates Normal speed	Striking a ball thrown from a pitcher Throwing a ball to a moving partner Making a lay-up in basketball while defended Double Dutch jump roping Shooting an bullet at a moving clay target

First, one-way to examine the predictability of the environment is to consider the mobility of the object that is to be acted upon. For example, in hitting a baseball that has been pitched, the ball (environment) is moving, making the skill more unpredictable and for that reason making it an open skill. If the ball is hit off a tee, the ball is stationary, thereby making it a closed skill. Let us look at an example from track and field. In the high hurdles, the hurdle itself is the environment. You have to ask yourself, does the hurdle move while you are attempting to jump it? Obviously not, so in that case, the environment is stationary and would therefore be considered a closed skill.

Box 3-3. Open verse Closed Skills Reflection Sheet
We would encourage you to think about a variety of sports and then identify the skills within them that would be considered open or closed. Use the template below to formulate your response:

Sport or Activity   Closed Skills   Open Skills
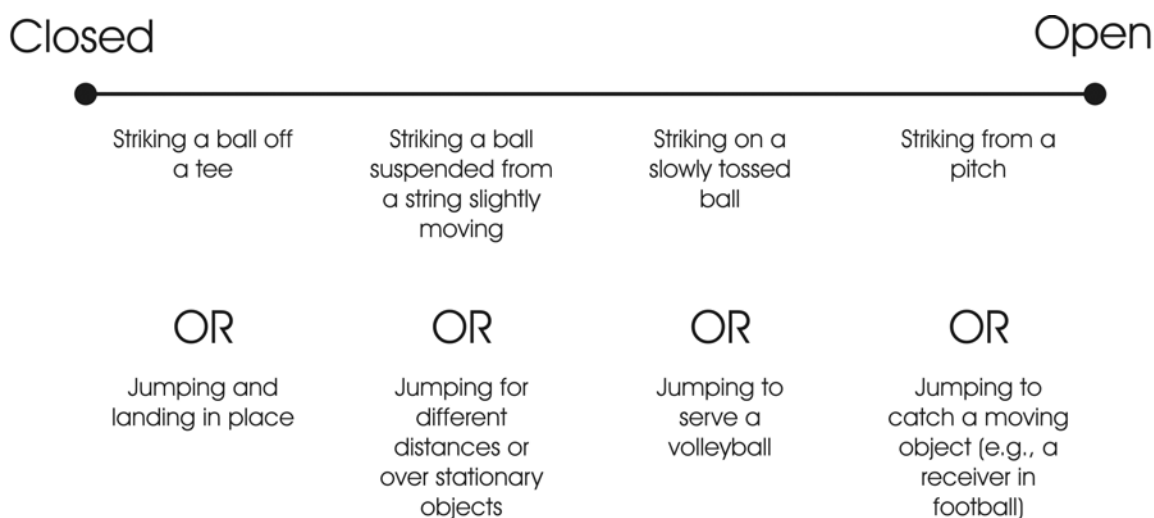_____

Basketball

Tennis

Square Dancing

Gymnastics

Volleyball

Another environmental consideration is the presence of another individual such as a partner, teammate, or opponent. Although the other person may have different roles in the practice session (in one case they might be a partner, in another they might be a defender), there is a new demand on the original performer. A skill that requires working with a partner such as kicking a ball back and forth makes it more open due to one person having to act upon what the other person is doing. Likewise, if both people are stationary and the ball is the only moving element in the environment, the skill would be more closed than open.

The speed at which an object moves affects the predictability of the environment. Slower moving objects are easier to act upon, thus reducing the instability of the environment. Catching a ball thrown from a close distance at a slow speed is very different from catching an object thrown that moves quickly. Thus, technically if the ball is moving it is an open skill yet if it is slow enough it can appear stable. If you are somewhat confused, remember that skills can be classified on a continuum with open and closed being the two extremes with many skills falling somewhere in between the two distinctions (see Figure 3-5).
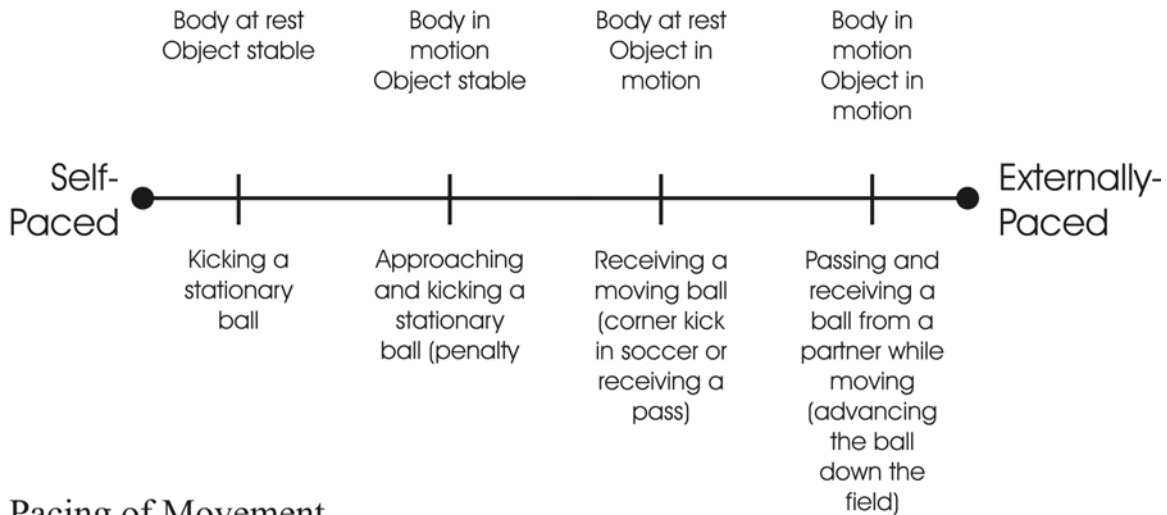
Closed   Open

| Striking a ball off a tee | Striking a ball suspended from a string slightly moving | Striking on a slowly tossed ball | Striking from a pitch |

OR   OR   OR   OR

| Jumping and landing in place | Jumping for different distances or over stationary objects | Jumping to serve a volleyball | Jumping to catch a moving object (e.g., a receiver in football) |

Nature of the environment

Figure 3-5. Example of how skills might fall along the closed verse open continuum

Self-paced verse Externally paced

Besides the nature of the environment, a skill can be classified according to how much input the performer has in when to initiate the movement. When a person has the opportunity to initiate a skill when they are ready, the skill is said to be **self-paced**. On the other hand, when an individual is forced to initiate a skill or perform a skill before they want to, then the skill is classified as **externally paced**. Once again these two classifications would be at opposite ends of a continuum with various skills situated

between the two. A person delivering a bowling ball can decide when to execute the movement, hence bowling would be a self-paced skill. In contrast, a dancer moving in time with the music would be moving at a pace that is externally decided since the music dictates when the dancer will move.

Body at rest
Object stable

Body in
motion
Object stable

Body at rest
Object in
motion

Body in
motion
Object in
motion

Self-
Paced ●————|————————|————————|————————|————● Externally-
Paced

Kicking a
stationary
ball

Approaching
and kicking a
stationary
ball (penalty

Receiving a
moving ball
(corner kick
in soccer or
receiving a
pass)

Passing and
receiving a
ball from a
partner while
moving
(advancing
the ball
down the
field)

Pacing of Movement

Figure 3-6. Example of self-paced and externally paced skills on a continuum

There is a relationship between self-paced verse externally paced skills and closed verse open skills. Typically skills that allow the performer to execute the movement pattern when they decide are usually closed skills where the environment is stable or predictable. If you have ever watched golf, you quickly realize that most of the shots in golf are self-paced, and the stability of the environment is without question. For example, putting is a self-paced skill as well as a closed skill. There is nothing in putting a golf ball that forces the performer to start the putt at a specific time. One reason golfers are able to move at their own pace is that the hole is stable, it does not move, thus allowing the players to execute the putt when they decide.

There is a similar relationship between externally paced skills and open skills. When a performer has to take action before they would like to in response to changing conditions then they are probably attempting to perform an open skill. Ping-pong is a perfect example of how an externally pace skill is also an open skill. Unfortunately, in ping-pong, the only time you get to determine when you hit the ball is on the serve. After the serve, you have to respond to the shot your opponent hits in order to return the ball. Thus, as a player in ping-pong you must respond to the flight of the ball in order to be successful, hence a rally in ping-pong would be an externally paced skill as well as an open skill.

Beginning and Ending Points

Skills can also be classified according to their beginning and ending movement points. All movements regardless of their difficulty have to start and end at some point. There are three ways to categorize skills in this category: discrete, serial, and continuous. A **discrete skill** is one that has a clear beginning and ending such as striking a ball or jumping over a box. When two or more discrete skills are used to perform a movement pattern then you have a **serial skill** such as fielding and throwing a baseball or softball**.** When movement patterns have indiscernible starting and ending points and are repeated over time they are considered **continuous skills.** Walking would be a prime example of a continuous skill. It is a movement pattern that has arbitrary beginning and ending points. Table 3-2 provides numerous examples of skills that would be found in each category.

Table 3.2 Examples of discrete, serial, and continuous skills

Discrete Skills (one action)	Serial Skills (combined actions)	Continuous Skills (repeated actions)
Throwing an object Catching an object Jumping and Landing Standing long jump Kicking an object (punting) Volleying an object Striking an object (Golf)	Fielding a softball ○ approach, gather, throw Lay-up in basketball ○ dribble, takeoff, release Serving in tennis ○ toss, swing, contact Bowling in cricket ○ run up, jump, deliver	Running Swimming Balancing Rowing Dribbling w/hand Walking

As you can see these skills are either single movements or movements that are combined and can be performed quickly or over time. Thus, discrete skills are the foundational skills that are used to create serial and continuous skills. The classification of skills into the different categories is significant in that it helps the teacher understand that starting on the foundational skills is the basis for effective skill progression.

Skill Progression

As was discussed in Chapter 1, one key to being an effective teacher is in providing appropriate learning experiences or practice tasks for children in order to influence achievement. We would suspect by now, after reading about the developmental perspective, that you are probably asking yourself the following questions:

- "How does all this information help me understand the order of skill progression?"
- "Is there a relationship between the three classification systems?"
- "Will I ever be able to design appropriate learning experiences, when there are so many skills to be taught?"

These are legitimate questions and concerns for the elementary education teacher. It is often a scary proposition to be asked to teach content that is unfamiliar. In light of these concerns, we believe the information that follows in this section will help to minimize

any misgivings you may have about understanding skill progression by providing you with a template (i.e., a progression tree) that can be used to in the analysis of motor skills.

Can you remember when you first learned a particular skill such as typing or riding a bicycle? Do remember the progression you went through in learning the skill? There is little doubt that you probably experienced some difficulty in learning the skill at first. For example in typing class, most students learn the home keys first, then the placement of the other keys before they learn the process of typing without looking at the keyboard. In learning to ride a bike, parents often start their children off with training wheels before they allow them to progress to riding on two-wheels only. This process of starting simple to more complex happens with any skill. In fact, you are probably smiling and shaking your head as you remember how the person teaching you the skill broke it down into simple parts so that it was easier to learn. As your mastery of the skill increased, so did the difficulty of the parts that were added.

Understanding this process of breaking skills down and starting with the easiest elements first is the fundamental nature of skill progression. There is a strong connection between the three classification systems in that they offer insight into how to order tasks for children to facilitate skill acquisition. Skills that are simple, closed, and self-paced are easier to learn because the child only has to focus or think about one thing and that is the mechanics of how to perform the skill. Therefore, children are able to cognitively attune to the qualitative aspects of performing the skill such as using the inside of their foot to kick the ball instead of other variables like keeping the ball away from a defender that may affect performance.

In the initial stages of teaching children any skill, you should structure the learning environment to be as stable (closed) as possible to make it easier for the learner. Since discrete skills are foundation skills, they should be taught first. These are single skills that can be practiced at an individual's own pace and would be easier to learn than skills that require external pacing. Jumping and landing or throwing an object like a ball or Frisbee are examples of discrete skills.

As students acquire discrete skills, the next step in the progression chain is to combine skills and practice them in a closed environment. For instance, gathering a ball rolled slowly by a partner is one way to practice fielding in a semi-closed environment. This task should precede one that requires the student to worry about fielding a ball coming off a bat or having to adjust to the ball that is bouncing. Practicing skills in an open environment is the final part of the progression. Of course, this applies only to skills that will eventually be performed in a changing environment where the performer has to make adjustments to his/her responds based on external demands. For example, it would be unnecessary to practice your tenpin bowling skills in an open environment since the pins are always stable thus creating a closed environment. On the other hand, learning to strike a ball suspending from a string before hitting a live serve would be a logical progression in helping a child learn to hit a ball with a paddle or racquet.

Progression Trees

As we see it, the one drawback with the GLSP (Graham, Holt-Hale, & Parker, 2004) and the spiral of skill progression that we mentioned earlier is that it only highlights what students can do at a particular level. Thus, it falls short in making the connection between what students can do and how performance is influenced by the environment and the type of skill to be learned. In this book, we use a "progression tree" to help you visualize the developmental process and the use of progressions for learning motor skills that move from simple to complex. When you examine a tree closely, you recognize that everything about the tree has ties or connections to its base. When the base of the tree is solid, the tree grows and expands to its full potential. Alternately, if the

Figure 3-7. Self –paced Task

foundation is weak the tree struggles to survive. Like the tree, a child who has a solid foundation of skills will be able to develop fully so they can enjoy being physically active over their life span.

We believe that children in a quality elementary physical education program would be able to pass through three stages of motor skill development. The three stages on the progression tree (i.e., foundational skills, expanding foundational skills, and proficiency in skill in foundational skills) take into account the environmental demands, pacing of skills, and how skills should be progress from simple to complex versions (See Figure 3-7).

Although the progression tree provides a graphic representation of the stages of motor skill development that children pass through, the picture alone probably fails to alleviate your concerns about designing skill progressions for children. Fear not. Chapter 9 includes progression trees for many of the fundamental motor skills that would be taught in a quality physical education as well as sample learning experiences that could be used at each developmental stage.
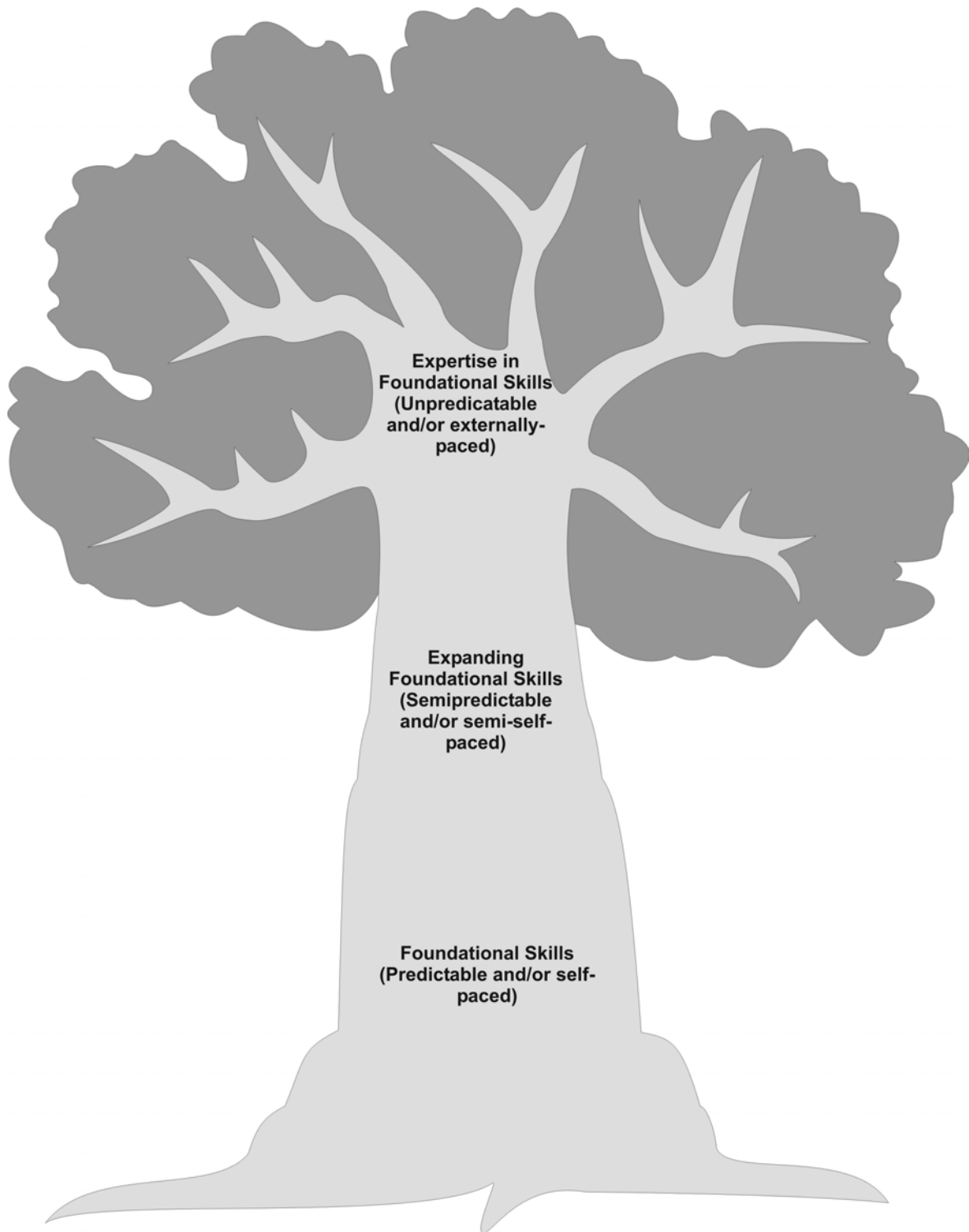
Expertise in
Foundational Skills
(Unpredicatable
and/or externally-
paced)

Expanding
Foundational Skills
(Semipredictable
and/or semi-self-
paced)

Foundational Skills
(Predictable and/or self-
paced)

Figure 3-8. Progression Tree illustrating the developmental process in acquiring motor skills

Appropriate Content for Elementary Physical Education

So, what is the physical education content that elementary school children should learn? We believe that elementary physical education programs should focus on students learning the concepts of movement as well as fundamental motor skills. All physical activities and sports utilize specialized versions of fundamental motor skills. Thus, if children are to feel comfortable participating in these activities well into adulthood, they must have a solid base on which to build more advanced movement patterns.

The Skill Theme Approach (Graham, Holt-Hale, & Parker, 2004) emphasizes the acquisition and competency in developing fundamental motor skills. In this approach, **skill themes** represent the movements that can be performed and are considered action words. In essence, they tell the performer "what to do." These are actions that are not specific to any activity or sport but could be used in a variety of sports. For example, kicking would be a skill theme that you might see in football, soccer, or rugby. Skill themes are essentially the same as fundamental motor skills. The term "theme," however, suggests how the skill could be used in more then one way or how it is interspersed throughout physical activity and sport.

Movement concepts are used in conjunction with skill themes because they are used to tell the performer "how to perform" the movement. Very rarely does a teacher say, "kick the ball" and nothing else. Usually the teacher tells the student what they want them to do with the ball or with their body. For example, you might say, "I want you to dribble your soccer ball using *light force*" or "strike the ball so that it goes through the hoop that is hanging at a *low* level" with the words light force and low telling the child how to execute the movement.

Movement Concepts

We will discuss movement concepts first since children need to have an understanding of the concepts before they can apply them to movement. In many physical education programs, the focus of the content in the early grades is on helping children learn the movement "vocabulary." You will notice that many of these concepts are reflective of information you would find in an early childhood curriculum. For example, part of the curriculum at this level focuses on teaching children about directions or relationships. Specifically, children are taught the difference between the terms forward and backward and over and under as well as many other concepts. Thus, the use of the movement concept categories of body awareness, space awareness, effort, and relationships helps the teacher create more enriching learning tasks for children. Each category is more fully explored in Chapter 11.

Table 3.3. Movement Concepts Taught in Physical Education

Space awareness – Where the body moves   • Directions (up/down – back/forward – right/left – clockwise/counterclockwise)   • Levels (low – medium – high)   • Pathways (straight – curved – zigzag)   • Location (self space – general space)
Effort – How the body moves   • Time (fast – slow)   • Force (light – strong)   • Flow (free – bounded)
Relationships – Between the mover and others   • Between the body parts (various positions)   • To other people (passive support/active support – moving together/apart – similar/dissimilar actions)   • To apparatus or the ground (facing front, back or side – above, below or side – right way up/inverted)

Skill Themes

Whenever you ask the body to move, you are performing a skill theme. Some themes require the body to travel from one point to another while others can be performed while stationary. They can be as simple as bending, walking, or reaching or as complicated as striking or flipping. Regardless of the difficulty, skill themes are reflective of movement. Skill themes are fundamental motor skills that are divided into three categories: locomotor, manipulative, and nonmanipulative (see Table 3-4).

Table 3-4. Skill Themes Taught in Physical Education

Locomotor skills	*Nonmanipulative skills*	*Manipulative skills*
• Walking	• Twisting	• Throwing
• Running	• Turning	• Catching
• Jumping	• Bending	• Dribbling (hands/feet)
• Skipping	• Stretching	• Kicking
• Hopping	• Balancing	• Punting
• Sliding	• Rocking	• Volleying
• Galloping	• Curling	• Striking (long/short handles)

Locomotor skills

Skill themes that have a person travel from one place to another or have the body move in a vertical plane are called locomotor skills. There are eight basic locomotor skills and they can be distinguished from each other according in the following ways:

1. Walking - the transfer of weight from one foot to the other with one foot always in contact with the ground.
2. Running - the transfer of weight from one foot to the other with a momentary loss of contact with the ground by both feet

3. Leaping - the transfer of weight from one foot to the ball of the other foot with a springing action.
4. Jumping - the transfer of weight from one or both feet to both feet.
5. Hopping - the transfer of weight from one foot to the same foot.
6. Galloping - a step in a forward direction with the other foot following quickly. The same foot always leads.
7. Sliding - a step in a sideward direction with the other foot following quickly. The same foot always leads.
8. Skipping - a combination of a long step and a short hop, alternating the lead foot.

Figure 3-9. Hopping is a locomotor skill

Besides practicing locomotor movements singularly, they can be used in various combinations to create skills like chasing, fleeing, or dodging.

Manipulative skills
Manipulative skills are the most recognizable and are primarily associated with "sport" skills. This type of skill always requires the performer to manipulate an object with some part of the body. For example, striking is a manipulative skill that utilizes the use of the hands to manipulate the object such as a the bat, racket, or paddle; where as in volleying, the performer may use the head, the arms, or the feet to contact the object. Manipulative skills are the most complex and are often the most difficult for students to learn.

Nonmanipulative skills
Unlike manipulative skills, nonmanipulative skills do not incorporate objects into the movement pattern; nor do they require the body to move from place to place like locomotor skills. In fact, these skills are performed from a relatively stable position and can be performed while standing or sitting such as bending, reaching, or twisting.

Final Words
There are many of you who can relate to the difficulties that Laura Ingles had during her formative school years, since you may have shared similar experiences. In fact, we think it is safe to say that all of us have experienced difficulty in learning a new concept or skill at some point in our lives. So, as a teacher, you need to be aware of how to present content to children so that they will be motivated to learn new material Adhering to the developmental perspective is one way to ensure that children are working at a level that is appropriate for them, thus increasing their motivation to learn and likelihood of success.
…………………………………….

Over to you. . . 👍

1. The principal at your school observes your third grade physical education lesson on throwing. At the end of the session, your principal states that the developmentally appropriateness of your lesson was refreshing to see. Provide a description of what your principal might have observed in your classroom.

2. Explain the progression tree and why it is representative of the developmental process. Can you offer a way to improve the tree or can you think of a model that might reflect this process more effectively?

3. Why might highly competitive tasks be unsuitable for children as they being to learn a new skill? Use the concepts discussed in this chapter to support your case.

4. How would you modify adult basketball to make it more appropriate for children? See if you can list five ways the activity could be changed (hint – lower the basket).

Portfolio Tasks. . .✍

1. Individually or with a group, indicate the proper order of progression in learning the following locomotor skills: skipping, galloping, walking, hopping, sliding, running, jumping, leaping. Provide a developmental justification of your order.

2. You have been asked to teach children to dribble a soccer ball. The children you are teaching have absolutely no experience with this skill. Using the information in this chapter and the different skill classification continuums, outline an appropriate teaching progression that would help your students learn this new and exciting skill.

3. A friend of yours has been ill for the past two weeks and missed the information presented in class about the developmental perspective presented in this chapter. You only have time to highlight for your friend two concepts covered. Write these two critical points on a piece of paper with enough detail so that your friend is crystal clear about the importance of the information you are providing.

Glossary

Cephalocaudal development. The sequence of growth occurs from the head to the feet.

Closed skill. A skill where the environmental demands are predictable or stable.

Continuous skill. A skill with arbitrary beginning and ending points.

Discrete skill. A skill that has a definitive starting and ending points.

Externally paced skill. A skill that has to be initiated before the performer is ready. This is usually due to external stimuli.

Intraskill variability. The difference in how students perform within the same skill.

Interskill variability. The difference in how students perform between different skills.

Motor development. The quantitative and qualitative changes in children as they move to more complex versions of physical skills throughout the lifespan.

Movement concept. A word that describes how to perform a movement.

Open skill. A skill where the environmental demands are changing or unpredictable.

Proximodistal development. The sequence of growth occurs from the midline to the extremities.

Self-paced skill. A skill that is executed at a time decided upon by the performer.

Serial skill. A combination of two or more discrete skills used to perform a movement.

Skill theme. A movement that can be performed.

References

Barrett, K. R., Williams, K., & Whitall, J. (1992). What does it mean to have a developmentally appropriate physical education program? *Physical Educator, 49* (3), 114-118.

Council on Physical Education for Children (2000*). Appropriate practices for elementary school physical education.* Reston, VA: National Association for Sport and Physical Education.

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety: The experience of play in work and games.* San Francisco: Jossey-Bass.

Graham, G., Holt-Hale, S. A., & Parker, M. (2004). *Children moving: A reflective approach to teaching physical education* (6th ed.). Boston, MA: McGraw Hill.

Haywood, K., & Getchell, N. (2001). *Life Span Motor Development* (3rd. ed.). Champaign, IL: Human Kinetics.

National Association for Sport and Physical Education (NASPE). (1994). *Looking at physical education from a developmental perspective: A guide for teaching.* A position statement of the National Association for Sport and Physical Education developed by the Motor Development Task Force. Reston, VA: American Alliance for Health, Physical Education, Recreation, & Dance.

National Association for Sport and Physical Education. (1995). *Moving into the future: National standards for physical education.* Reston, VA: American Alliance for Health, Physical Education, Recreation, and Dance.

Rink, J. E. (2001). *Teaching physical education for learning* (4th ed). Dubuque, IW: McGraw Hill.