



## Looking at Physical Education from a Developmental Perspective: A Guide to Teaching

Motor Development Task Force 1995

A Position Paper from the National Association for Sport and Physical Education

### Preface

Over the last several years, physical education has experienced a renewed interest in the concept of “development.” There is a commitment to development as a fundamental idea guiding program design and implementation. In 1992, the National Association for Sport and Physical Education (NASPE) adopted a document developed by the Council on Physical Education for Children (COPEC). The document centers on developmentally appropriate physical education practices for elementary school-aged children. Similar documents are being developed for teachers of preschool- and middle school-aged children. Clearly, development has emerged as an important idea for physical education in the 1990s.

With this renewed interest in development, there is real concern it may take on “bandwagon” status, meaning almost anything to anyone. Development is an important idea for physical education. Therefore, it is critical that we define what we mean by development and what it means to have a developmental perspective on physical education curriculum and instruction. How can our physical education curricula reflect a developmental perspective? How can teachers plan lessons and teach children to become more skillful from a developmental perspective?

This booklet gives teachers suggestions about how to plan and carry out a physical education program that is developmentally appropriate. The booklet is organized around three questions: (1) What is development? (2) What is a developmental perspective? and, (3) How can teachers plan programs and lessons that reflect this developmental perspective in the reality of day-to-day situations?

The booklet was developed by the Motor Development Academy of the National Association for Sport and Physical Education, an organization of the American Alliance for Health, Physical Education, Recreation and Dance.

### What is Development?

One-year-old infants struggle to take their first steps. Five years later, they are running around the playground playing tag. At 16, they are stars of their high school tennis teams. Years later, they are ardent recreational tennis players who compete in their city’s mixed doubles master’s tournaments. From the one-year-

old toddler to the hard-hitting tennis player, we see change. We see development. It is about the changes we see in individuals across their lifespans.

These lifespan changes do not occur just because an individual gets older or they years pass. Motor skills do not appear at certain ages without accompanying experiences. Motor skills develop from an interaction between one's hereditary potential (i.e., nature) and life experiences, including formal instruction (i.e., nurture). Thus, development is an interactional process that leads to changes in behavior over the lifespan.

### **The Nature of Developmental Change**

Individuals change in many ways. They become taller, increase their vocabulary, and run faster. Are all these changes development? What are the characteristics of developmental change? We can identify six elements of change. They are: 1) qualitative, 2) sequential, 3) cumulative, 4) directional, 5) multifactorial, and 6) individual.

#### *Change is qualitative.*

A 10-year-old can throw farther, run faster and jump higher than a 2-year-old. Besides the obvious distance, speed and height differences, the motor skills of these two children differ in fundamental ways. The motor patterns used to achieve their throws, runs and jumps differ qualitatively. Developmental change is not just more of something, but reflects something different. More advanced performers use more effective movement patterns than immature movers do.

#### *Change is sequential.*

You walk before you run. Children's motor skills develop in an orderly manner. They develop over time in a sequence. Many of these sequences have been identified for motor behavior. We can assess where children's motor skills fall in a developmental sequence, from immature to advanced.

#### *Change is cumulative.*

Developmental change is built upon previous capabilities. Early behaviors act as "building blocks" for later emerging skills. For example, running is built upon walking.

#### *Change is directional.*

Developmental change is going somewhere, toward some goal. There is a direction to the change we see. For movement, this goal may be skillfulness or adaptiveness. The direction can be progressive or regressive. Some individuals may never reach skillfulness before beginning to "lose" their skills through a lack of practice, aging and/or a disease process. Declines and advances in skill both are developmental, as there is a *directionality* to change.

#### *Change is multifactorial.*

Single factors do not cause developmental change. Change results from many factors acting together. A child can do a one-footed hop when he has the strength, balance, perceptual capabilities, and motivation to do so. The emergence of the one-footed hop is not the result of any one of these factors, but results from interactions among all of them. Rate of change may be limited by a lack of progress in one or more factors. Those factors that may be holding back developmental change are called **rate limiters**.

*Change is individual.*

Although the general sequence of change remains the same for everyone, the **rate** of change differs from one individual to another. By five years of age, many children have achieved the developmental sequence, gallop, hop, and skip. However, other children may take another year before achieving the last locomotor skill in the sequence, skipping. Change results from a multitude of factors that come together in different ways and at different times for different individuals who are changing in unique ways. Change occurs in the context of an individual's own body characteristics and environmental situations.

### **A Developmental Perspective**

We watch a one-year-old toddler, a first grader, a senior citizen as they move. We look at one-year-olds and think about what they will be like as 16-year-olds. We see senior citizens and wonder what they were like as teenagers or young adults. In these examples, we are taking a *developmental perspective*. We look not just at today's behaviors, but ask about what came before and what will come later. We see today's actions on a lifespan continuum of ever-changing behavior. To have a developmental perspective means that change is seen as: qualitative, sequential, cumulative, directional, multifactorial, and individual.

While knowing the age of a person is important information, it should not be confused with employing a developmental perspective. Development is **age-related but not age-determined**. Many 5-year-olds skip, but simply being 5 years old does not mean you will skip. More important than a person's age is information about where that person's performance occurs on the developmental continuum. For example, the one-year-old toddler walks with short steps, a wide stance and arms held high. On a developmental continuum, this behavior is characteristic of a new walker. From a developmental perspective, this behavior is appropriate for an infant of this age. However, if this behavior occurred in a 5-year-old, it would be considered developmentally delayed.

From a *developmental perspective*, however, the infant's and the 5-year-old's walking patterns are not wrong. They are simply patterns that fall at the early end of a developmental continuum. This continuum is a developmental path.

Seeing the infant of 5-year-old's behavior as *wrong* or in need of correction means you are using an "adult model" or "miniature adult" perspective. You are not using a *developmental perspective*. In the adult-model perspective, all motor

skills are judged against an advanced or mature model. This model is sometimes called the “error correction” model. Individuals not performing at the mature level are wrong or in error. These errors are to be corrected, usually by a teacher’s or coach’s instructions.

Understanding what a *developmental* perspective is is not easy. The *developmental perspective* is not one in which motor skills “just mature.” It is not a perspective in which everyone is judged against the model of the elite or adult performer. It is not a perspective where your age decides your skill level. Sometimes we assume we have a *developmental perspective* when we are really thinking about skill acquisition from the adult-model viewpoint.

To test your knowledge of the developmental perspective, answer the following questions. They highlight characteristics of developmental change.

**Do you have a developmental perspective?**

- *A second grade class is given a running test in September and again in May. Most children are running faster when tested the second time. Are these children more fit? YES or NO. Are they more skillful? YES or NO.*

If NO, or not necessarily was your answer, then you probably have shown a developmental perspective. Why is this true? Isn’t improved performance evidence of development? Not always. Children could be running faster simply because they have grown taller. Developmentally, it is not enough to see a change in running speed. Developmental change is **quantitative**. We also want to see progress toward skill and fitness goals. These include not just quantitative changes (outcome scores like speed or distance), but qualitative changes as well (descriptions of form such as developmental levels). For example, in running, children could still be using a developmentally immature leg pattern but run faster due to increased leg length. Using only a product score, we may fooled ourselves into thinking children had improved motor skills when they may have just gotten bigger.

- *An 8-year-old throws a ball for distance keeping his trunk motionless. Is his throwing action wrong? YES or NO.*
- *Should this 8-year-old’s instructor/coach teach him to throw a hip-lead pattern? YES or NO.*

If you answered NO to these questions, then you may have taken a developmental perspective. If you considered throwing with a motionless trunk “wrong” for an 8-year-old, you are judging his performance against the adult model. This child is throwing with the earliest type of trunk action. The throwing pattern is more characteristic of a 3- or 4-year-old. For an 8-year-old, this action would be considered *developmentally lagging*, but it is not wrong.

If you hold a developmental perspective, you realize motor skills change **sequentially**. This means motor skills progress in an order, over time. Certain motor patterns within one skill appear before other patterns. In our example, the next developmental level following a motionless trunk is a block rotation pattern. In block rotation, the shoulder and hip turn simultaneously. A hip-leading rotation follows block rotation and is the mature pattern. These changes in trunk action make up a *developmental sequence* for throwing. It is also important to recognize that sequential changes often take a long time. Our 8-year-old may attain the block rotation pattern only after several years. He also may remain there, never reaching the mature or advanced pattern. Or, he may reach the hip-lead pattern after several additional years of development.

We also see evidence of the sequential nature of change as skills go from simple to complex. Because a young child has difficulty hitting a pitched ball, we adjust the task to hitting off a tee, or suspended from a string. If the ball were pitched rather than stationary, the youngster might swing and miss. By changing the task to a stationary object (i.e., on a tee), the child may have more success at contacting the ball. However, progressing to a ball pitched by the teacher or another child may take a long time. The child first must increase his or her ability to deal with more uncertainty in object position and speed. Again a developmental perspective implies that change in skill is **sequential**, i.e., from simple to complex.

- *Will an 18-year-old college student who has a primitive throwing pattern learn a powerful topspin serve in an 8-week tennis class? YES or NO.*

The answer NO, again, shows that you have a developmental perspective. Why can't a primitive thrower perform a skillful tennis serve? A primitive thrower uses little or no trunk rotation or swings the elbow forward to face the target (among other things). Because motor skills are cumulative, later behaviors are built upon skills achieved earlier.

In a developmental perspective, change is **cumulative**. Simpler or more primitive skills appear before more complex or advanced skills. Often the simpler skill acts as a "building block" for the later emerging skill. Thus, a person who throws with an immature pattern is likely to incorporate that pattern into a more complex skill. In other words, the throwing pattern acts as a basis for the coordination of a tennis serve. Since the throwing action is immature, so too will be the tennis serve.

Because motor skill development is cumulative, it is possible that one does not accumulate sufficient experiences and skills to progress. If this occurs, you have run into a proficiency barrier. That is, you are unable to participate successfully and effectively in sport due in large part to the limitations imposed by your lack of prior skill attainment. Thus, our 18-year-old tennis player uses immature

movement patterns in a variety of sports requiring throwing skills, including tennis.

The cumulative nature of skill development is particularly important regarding the acquisition of fundamental motor skills. Failure to acquire advanced patterns of coordination for these skills can markedly restrict later skill development. Some motor development texts and many curricula suggest fundamental motor skills are “mature” by 5-7 years of age. However, research shows many children do not reach advanced levels of many skills until adolescence and many never attain the highest level at all. It does not matter if we are talking about fundamental motor skills or later sport specific or dance skills. Skill acquisition is a cumulative process where one skill is built upon the attainment of another.

- *A soccer unit planned for 6th graders is used for 8th graders with very little adjustment. Is this a developmentally appropriate practice? YES or NO.*

If you said NO, you recognize that motor skill development is directional. Development is toward some end. For most of our life, the direction of skill development is toward increasing skillfulness. From 6th grade to 8th grade, your students’ motor skills should progress toward more skillfulness. Unit and lessons plans are designed to continually challenge the skills of the students so they might improve. Of course, our motor skills might regress. Lack of opportunity for instruction and practice may result in a student’s development stopping or going backward. However, as educators we hope the direction of motor skill development is toward increasing skillfulness.

When a person is injured or if changes occur in a person’s body (such as with aging), motor skill development might look as if it is regressing. However, another way to look at the changes that are occurring is to see that the goal of development is to move the individual toward increased adaptations. Physical changes can result in other changes. Development is occurring, but it is toward a goal in which the individual adapts his or her movement to ongoing physical changes. For example, the elderly might reduce their approach in bowling from a four- to a one-step action. This is an example of development where adapting to physical changes may or may not result in a regression in performance.

- *Will 4th graders who perform dribble, kick, and pass skills during “drills” play a game of soccer successfully? YES or NO.*

If you answered NO or “not necessarily” to this question, then you hold a developmental perspective. Children may display relatively advanced physical skills, however, when placed in a game these skills fall apart, or regress dramatically. Individuals may not be successful at games play because they lack the cognitive knowledge or strategies necessary to know where and when to pass a ball to a teammate. They may lack sufficient social development to understand the need to work together as a team. Development results from many

factors coming together in a specific setting. If an individual lacks developmental “maturity” in any one of these necessary ingredients, progress will be hindered.

It is important to examine all aspects of a learning situation to find where individuals may be having difficulty. Their “fundamentals” may be at an intermediate level of development, but their ability to combine skills (like receiving a pass and dribbling) may be immature. Perhaps they can combine skills, but are unsure of what to do with the ball once they are picked up by a defender. They can combine skills, but fail to see the importance of cooperating with a teammate to move the ball downfield toward the goal. Teachers need to structure learning situations to encourage development in all domains of behavior—motor, cognitive, social and psychological.

- *Some 7<sup>th</sup> graders in your classes are quite proficient in playing a full court game of basketball. Others are not. To keep the well-skilled students challenged, should you have everyone play a full-court game during part of the class period? YES or NO.*

If you said NO, you are acknowledging that change is individual within a developmental perspective. Students who are ready to play a game of basketball are more developmentally advanced than those who are not. Advanced players may enjoy basketball skills and have practiced throughout the summer and on weekends with their friends. They may be more physically or socially mature. Those not ready for the full game may be less interested in practicing and refining their skills. Because change is individual, and based in many factors, all children will not be ready for the same challenges simultaneously.

### **Readiness**

By now, you should appreciate that no matter where a person is in their lifespan, she or he can be placed on a developmental continuum ready for new challenges. *What and how much* a person is ready to change depends on that set of relationships unique to each person and task. Many factors impact whether change occurs. These include the extent to which a learner has the physical capabilities (e.g., fitness level and size), minimum motivation levels, a cognitive understanding of the task goal, **and** sufficient opportunities to practice. Deciding where an individual is in relation to these and other factors will decide their level of *developmental readiness*.

Generally, a good starting point for understanding a learner’s developmental readiness is an examination of that person’s developmental level for the specific task being performed. During childhood, developmental changes mostly occur in a positive and progressive direction, but still only gradually and cumulatively. In older adulthood, with decrements in fitness or accumulations of disabling conditions associated with aging, developmental changes are more likely to happen in a regressive, or even adaptive fashion. These changes are still cumulative and gradual. Whether one changes at all and the ease and direction

of that change depends on complex relationships between the person, their environment, and task requirements.

The impact of developmental principles on person-environment-task interactions can provide teachers, coaches, and parents with some invaluable information to help learners. If a teacher presents a drill or learning experience and the learner progresses in a positive direction, the intervention was successful in matching that learner's developmental readiness. Progressing positively means using a developmentally more advanced movement pattern or having better success or an improved performance score. This is another way of saying the intervention was developmentally appropriate for that learner and task at that time! On the other hand, if a learner regresses (e.g., shows a more rudimentary movement pattern), she or he was probably not developmentally ready for that experience. If a child does not change in a particular setting such as a game or competitive situation, they were probably not developmentally ready for that experience, either. In other words, the experience was not *developmentally appropriate* for that person then. You can test your understanding of developmental readiness by thinking about the following situations.

- *A young child will learn to swim more easily than an adult. YES or NO.*
- *It is easier to teach an elementary child new skills than it is a teenager. YES or NO.*
- *Older adults learn motor skills more slowly than children or young adults. YES or NO.*

Answering NO or not necessarily to these statements suggests you have some important insights into a lifespan developmental perspective and the idea of developmental readiness. It is commonly thought preschoolers and elementary children learn fundamental movements and other skills such as swimming more easily than older children and adults. After all, isn't that why are in school and show such ease in learning so many things? Although there is some evidence that "developmental readiness" to learn is age-related, the picture is hardly as clear as folklore would have it.

The readiness to swim, and the rate and ease with which a person learns are decided by many factors. Examples include the person's size, strength, body density, handicapping conditions, cognitive capacity, and degree of motivation. Also important are previous experiences and fears, social expectations, particular facility and water characteristics (such as depth, temperature, and chemicals). Even the personality and experience of the swimming instructor has an influence. With all these factors operating, it may seem a miracle that anybody ever learns to swim! However, many teachers understand that some of these factors are more important than others and that their importance may be different at different points in time. They understand *developmental readiness*.



## Summary

We have seen that developmental change is qualitative, sequential, cumulative, directional, multifactorial, and individual. In a developmental perspective, deviations from so-called “advanced” or mature performances are not errors. These **qualitative** differences are part of the **sequence** of changes we see as motor skills develop. Learning experiences must move students in a positive direction, from immature patterns they currently demonstrate, to more advanced behaviors. The shift from a less advanced to a more advanced motor pattern will take time—lots of it! The rate of change will vary with the **individual**. Motor skill development is directional, with the potential for either progression or regression. Therefore, teachers need to structure practice situations that give enough practice to maintain and advance levels of performance. In addition, they must be sensitive to the level of complexity of a task’s structure, to guard against regressions in performance. **Many factors** impact task performance simultaneously. Therefore, children need to experience different motor skills in many different situations. Finally, teachers must realize that earlier experiences with one skill have the potential to affect performance of other skills, i.e., skill development is **cumulative**. Children need time to develop more advanced movement patterns, especially in the fundamental or “building block” skills. Without this base, they will find it difficult or impossible to advance to more complex, sport-related versions of these motor patterns.

## The Developmental Perspective on Physical Education Curriculum and Instruction

Developmental change is qualitative, sequential, directional, cumulative, multifactorial, and individual. The descriptions below provide some examples of ways these principles guide curriculum, instruction, and assessment in physical education.

### *Qualitative*

The goals and outcomes of a physical education program should include qualitative and quantitative goals. Instruction should include demonstrations and feedback on the development of movement patterns (qualitative outcomes), from their initial emergence to their most advanced level. Quantitative goals such as how far children throw are important, but they should be accompanied by qualitative outcomes such as the throwing patterns used to achieve the distance.

### *Sequential*

Curriculum and instruction are planned to present content in vertical and horizontal progressions. Assessment is conducted according to the developmental level of students within these progressions. Instruction and curriculum should be designed to promote the sequential development of motor skills. This implies that no two grades will completely overlap in content and outcome goals.

### *Cumulative*

Curriculum is designed so later learning experiences are built on previous learning experiences in earlier grades. Foundation skills and abilities are developed before introduction of more complex and difficult skills. Sufficient practice opportunities are provided within lessons and units. Complexity is built within and across unit and lesson plans. Even as the difficulty of learning experiences increases, performance in more complex forms is assessed in relation to developmental criteria.

### *Directional*

The direction of a physical education program is provided by its stated goals and outcomes. The National Standards for Physical Education provide a guide for the direction of the physical education curriculum and instruction. For example, one benchmark for a physical education program may be that students display an intermediate or advanced level of competence in at least one activity from three or six categories of activities (e.g., dance, individual sports, dual sports, etc.). This type of benchmark clearly shows the direction of the developmental path. Curriculum and instruction nurtures students' development toward the benchmark goal.

### *Multifactorial*

Goals and outcomes should be planned considering interactions between developmental levels in many domains, including cognitive, social, affective, and psychomotor. Planning and implementation of instruction must acknowledge children's abilities, skills and knowledge (e.g., growth, strength, perceptual skills). Knowledge of developmental sequences in other domains (social, affective, physical, cognitive) is helpful in interpreting performance assessments. Often, limitations in motor performance relate to development immaturity in other domains.

### *Individualization*

Performance goals such as those set forth in the National Standards for Physical Education are age-related. This means we might expect most of students to attain a particular outcome at a particular age. Some individuals will attain the same outcome at different ages. Curriculum and instruction should be sensitive to individual differences in developmental level. Assessment is conducted in relation to developmental skill sequences rather than an adult model of correct form. This implies a range of content and expected outcome goals at any specific grade level.

The points made above highlight several important skills and understandings teachers and clinicians need to provide developmentally appropriate practices and experiences to learners at any point in the life-course. They may be summarized as:

- *knowing the developmental sequence of many fundamental movements;*

- *assessing individual performances within developmental sequences;*
- *understanding how to plan and carry out vertical and horizontal progressions of practice tasks of increasing complexity and difficulty;*
- *planning and carrying out lessons that tailor teaching to each individual, even during group instruction.* Lessons should provide practice opportunities meeting the needs of several developmental levels within the same class;
- *understanding the impact of the person-environment-task interaction on movement performance.* Teachers should know and understand developmental sequences in social, cognitive, physical, and affective domains that interact with psychomotor performance;

and,

- *understanding that curricula (including lesson plans and teaching progressions) are not sacred and must fit individual interests, needs, and capabilities.*

### **Implications of a Developmental Perspective for Physical Education**

The importance of an appropriately structured environment and its interaction with a mover's current biological status is illustrated with a simple example. Catching a variety of objects under varying conditions (e.g., footballs, Frisbees, tennis balls) is important to successful performance in many game-like contexts. Observation of elementary school programs suggests children may get plenty of experience with catching tasks. Are those experiences structured appropriately? In "typical" classes, children often are drilled in only a few situations. For example, they may practice throwing a ball directly between partners. This activity might be extended to partners making throws that require movement of a step or two to reach the ball. Following this practice, the class often moves on to a modified version of a game. This new situation requires players to throw and catch in relation to the game context. It is at this point basic skills often break down. The complexity of the learning experience has been increased too quickly for the skills of some children. In particular, cognitive, decision-making skills may be too advanced, given children's previous experiences. Or, they may sufficient cognitive skills, but lack physical skills to perform as they know they should. This situation results in regression to less advanced patterns of movement as players try to focus on too many things simultaneously.

Examples like this are familiar to anyone who teaches children. There is a solution to the breakdown of skill. Because task requirements directly impact the quality of movement performances, the structure of each task is critical. The specific skill levels of children must be considered and accounted for as task complexity increases. Developmental differences between children imply that

tasks are individualized. On one hand, this can mean giving children choices about what they do: choosing equipment, choosing partners (or to work alone), or choosing options regarding how a specific task will be done. Giving children some choices is important. On the other hand, teachers must remember that children will often select the familiar, rather than the challenging. That is, children do not always make the best choices, choices that will result in the enhancement and advancement of their skills. Teachers must help children select from a variety of options, so they will continue to be challenged appropriately. Sometimes teachers must make choices for children who are not yet ready or able to make good choices for themselves. Using a developmental perspective, and knowing the sequential nature of change, teachers assess the status of children. They make suggestions and give direction so children can advance to the next developmental level.

### **Individualizing Tasks Through Student Choices**

*When teachers individualize tasks, they are requiring students to make choices about:*

- *what movements they wish to perform,*
- *how they might do them,*
- *the type/size/weight of equipment or apparatus they should use.*

Then, once choices are made, it is each teacher's challenge to help the students use the option(s) selected to advance their level of performance. Of course, children need help to make choices aimed at advancing their skill development and not simply repeating the familiar. Some suggestions follow to help you to think about this process.

Student choices can include the selection of:

- equipment, such as a short racquet, long racquet, or a range of different sized and weighted balls, or even their open palm to strike a ball,
- apparatus, such as apparatus set at different heights or widths (hurdles, nets, ropes, vaulting boxes),
- activity style, such as between playing a competitive game, a cooperative game, or solitary skill practice.
- task complexity, such as a clearing drill or a clear, clear, drop, drop drill in badminton,
- movement response, in educational gymnastics, such as the type of balances and locomotor actions that will go into a sequence, rather than teacher-set

specific balances (e.g., a headstand, handstand, front scale) or locomotor skills (e.g., forward roll, cartwheel).

### **Helping Students Progress Through Developmental Levels**

It is not enough to practice within a developmental level. We need to help students progress to more advanced levels as well. One way to promote this progression is for the instructor to structure increasingly complex task practice situations. We can promote advanced developmental levels earlier by changing levels of task complexity.

*To help students in this process, they need to:*

- *know for what they are aiming and set goals for themselves.* Teachers must help give them an idea of what the next level of skillfulness is, or perhaps what the most advanced level is—without pressure for them to get there immediately.
- *see intermediate and advanced-level demonstrations of skills in a class where there are both beginners and intermediate* (for non adult groups, use age-appropriate models whenever possible),
- *try a more complex version of a task when ready.*

*To avoid the proficiency barrier, students should:*

- *take meaningful, small, progressive steps between learning a basic skill and putting it into a more complex situation,*
- *show their developmental level through a pretest specifically designed to assess skill level* (e.g., taking a skills test, or being observed in a game situation are especially important for children and young adults).

### **Assessment and Evaluation of Students**

*Teachers must:*

- *know the developmental levels of a skill and make certain they assess each student.* Let the student know where they are by both continuous formative and summative assessment. Give report cards with qualitative and quantitative information.
- *Emphasize progression toward a goal, rather than an absolute performance.* If grades are used, then use properly scaled improvement as a significant component of this grade,
- *Use the National Standards for Physical Education as guidelines for deciding your goals.* Realize, however, that many children will reach outcome goals earlier (or later) than stated in the national standards. Be prepared by expecting students to go on to more complex or different skills or situations.

Expect other students to progress more slowly. These students may need additional physical education experiences.

### **In Conclusion**

Teaching and learning motor skills is a complex and difficult process. It takes many years, and much practice and patience by both student and teacher. As teachers of physical education, we know how satisfying it is to finally “get it,” and reach the level of skillfulness we have long sought. We know how worthwhile all the time and practice are.

For some teachers, the information contained in this pamphlet may seem too general. It is the position of the Motor Development Academy that many excellent sources of movement content already exist. Often, however, they are presented without sufficient knowledge of developmental principles. For teachers to help students “get it,” it is crucial to acknowledge the developmental nature of changes in motor skills. We hope we have provided some of that knowledge here.

### **Resources**

Published by NASPE to support quality physical education programs.

#### **Books:**

National Association for Sport and Physical Education. (2000).

*Appropriate practices for elementary school physical education.*

Reston, VA: Author.

National Association for Sport and Physical Education. (2000).

*Appropriate practices in movement programs for young children.*

Reston, VA: Author.

National Association for Sport and Physical Education. (2001).

*Appropriate practices for middle school physical education.* Reston,

VA: Author.

National Association for Sport and Physical Education. (2004).

*Appropriate practices for high school physical education.* Reston,

VA: Author.

National Association for Sport and Physical Education. (2004). *Moving into the future: National standards for physical education*, 2nd ed.

Reston, VA: Author.

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