Richard, J.-F., & Picard, Y. (1998). Physical education in our schools: Emphasizing the educational outcomes of physical activity. *The Canadian Association for Health, Physical Education, Recreation and Dance Journal, 64* (4), 44-45.

Rink, J.E. (Ed.). (1996). Tactical and skill approaches to teaching sports and games [Monograph]. *Journal of Teaching in Physical Education, 15* (4).

Schempp, P. (1993). Constructing professional knowledge: A case study of an experienced high-school teacher. *Journal of Teaching in Physical Education, 13,* 2-23.

Schunk, D.H. (1986). Verbalization and children's self-regulated learning. *Contemporary Educational Psychology, 11,* 347-369.

chapter

3

Teaching Games for Understanding As a Curriculum Model

Joy I. Butler and Barbara J. McCahan

"Welcome back, sixth grade! We're going to start the year with a soccer unit. Like the professionals, we're going to learn how to perform some of the techniques we'll need so that we can play more effectively. I want you to get into pairs, stand about six feet apart, and start by practicing your inside kicks. Right! Let's get set up. One person in each pair go and collect a ball."

As students collect their soccer balls, they can be heard to be mumbling, "We did this last year," and "Can't we just play the game?"

Mr. Pettitt, a fifth-year teacher, overhears one of the students and says, "Now come on, Tony. Listen up! This is going to be fun. Once we have this down, we can start playing."

Clearly, Mr. Pettitt is troubled by the responses of his students but is compelled to teach in this fashion. After all, this is the basic curriculum model he has always used. His instincts tell him to move quickly through the skill progressions so that the class stays motivated. He has often had difficulty integrating students with greater playing experience from extracurricular teams with students whose soccer experience is limited to the scope of their physical education program. Although the less experienced students need time and practice to develop skills, they also need opportunities to transfer those skills into actual play or they will make

little, if any, progress in the unit. Mr. Pettitt bemoans the limited time he has available to hone each student's skills and still allow for playing. There just isn't enough time allowed for physical education classes to cover all the games and do any of them justice!

This well-meaning, energetic, and enthusiastic teacher is faced with a dilemma. He wants his students to play games, but he does not want to spend too much of the precious class time having students play because the students clearly need so much work on their skills to play well. As Richard Light and Rod Fawns (2003) stated,

> Despite the potential that games offer as a learning process and the complex higher order thinking that is essential for skillful performance, in team games much teaching is still purely focused on the physical dimensions of games isolated from their social and cognitive dimensions. (p. 161)

What Mr. Pettitt needs is an alternative that can accommodate different learning abilities and focus on the cognitive and social dimensions of a game in addition to the physical dimensions. Using a curriculum model based on a conceptual perspective of games can provide just such an alternative. Thoughtfully implemented, this alternative can free the teacher from the need to address all games specifically. Instead of centering pedagogical work around *how to do it* (techniques practiced), Mr. Pettitt would be able to address the *why* (common concepts) and *what if* (skills and strategies for better play). This paradigm shift would allow Mr. Pettitt to change his teaching focus from correcting what is wrong with the students' actions to encouraging his students to respond with a range of creative actions, generated by their own decisions.

Any curriculum model is based on a conceptual framework and a set of assumptions about educational priorities, presentation mechanisms, instructional methods, and evaluation criteria. Although curriculum models vary in their philosophies, they guide teachers and administrators in delivering and assessing programs. Some curriculum models are highly prescriptive and provide detailed guidelines for teacher behaviors. Others rely on guiding concepts and allow teachers the freedom to determine how to implement these concepts. Curriculum models, regardless of their goals or flexibility, are designed to help structure programs through the use of a plan that will have instructional integrity and predictable learning outcomes.

The purpose of this chapter is to

- examine how the inherent assumptions and values of Teaching Games for Understanding (TGfU) can help teachers develop a healthy, vital, and inclusive games curriculum;

- compare the TGfU model with the technique model in terms of purpose, objectives, outcomes, and games framework;
- examine the TGfU classification system;
- show how to create a spiral curriculum that will obviate the need for physical educators to cover all games;
- provide planning considerations using a sample TGfU games program;
- describe the learning steps involved in the TGfU model; and
- offer guidelines for implementation.

Inherent Assumptions and Values

The philosophy, or system of values, that underlies a curriculum model frames the curriculum design and the teaching process. Effective curriculum models have the potential to align educational priorities (what is taught), educational philosophy (why things are taught), and educational methods (how things are taught) (Butler, 1993). Several other fundamental questions are also addressed when a curriculum model is adopted, including: What is the role of the learner? What is the role of the teacher? What is the social and structural context of the learning environment? How will learning be assessed and evaluated?

The educational philosophy underlying the TGfU model is based on constructivism. This learning theory advocates that comprehension and meaning be built gradually using experiences and contexts that help students become willing and able to learn. Constructivism uses problem solving, tasks, groups, and sharing activities to provide learning that can be structured around basic concepts. Brooks and Brooks (1999) in *The Case for Constructivist Classrooms* say that "Deep understanding, not imitative behavior is the goal. . . . We look not for what students can repeat, but for what they can generate, demonstrate, and exhibit" (p. 16).

An inherent challenge for physical education teachers is to break away from the exclusive use of "direct instruction," which has been the norm for most of the current adult generation. This norm developed under the influence of curriculum reformist Ralph Tyler in the 1940s.

The University of Chicago first published Tyler's *Basic Principles of Curriculum and Instruction* in 1949. Herein Tyler argued that teachers should develop specific objectives for their courses, develop activities and programs to reach the goals, and then prepare tests to determine if the goals had been reached. Tyler's original intent was to help teachers to identify problems in learning and practice creative ways in solving those problems.

Historically, the use of this model has been partly the result of how physical educators interpreted Ralph Tyler's rationale (1949). This led to a step-by-step process for developing a curriculum in physical education that attempted to provide a blueprint for teaching in the form of a technical model. Kirk and Tinning (1992) described the key features of this approach as "the use of objectives in planning programs and instructional episodes; the selection of subject matter and teaching strategies based on intended learning outcomes expressed as behavioral objectives; and assessment of the behavioral outcomes of instruction involving measurement and quantification" (p. 1).

The main emphasis of the technical model has always been performance, and the model has generally yielded good performance results for some. Most physical education teachers came through their early school years with a technique approach and went on to use it to help students master techniques. Generally, students who enjoy games and are inherently good at them have always had positive experiences with the technical approach.

The technical approach, however, allows little room for creativity or for learner empowerment. In 1982, Bunker and Thorpe drew attention to students who are, or who have been, disaffected and disenfranchised in their experiences in games education. Others have also called on physical educators to reexamine the way we teach games and to find ways to enhance our curriculum (Griffin, Mitchell, & Oslin, 1997; Kirk, 1993; Werner & Almond, 1990). To access the many assets of constructivism, a curriculum would build on concepts and strategies that allow both students and teachers to think "out of the box," to step back from the status quo and challenge assumptions about what should be learned and how. In this spirit, Kirk (1993) suggested that future curriculum workers will need "capabilities which allow them to learn from experience, to regenerate, and to imagine beyond experience—in a word, to be reflexive" (p. 262).

To illustrate how the TGfU model can be used as a basis for curriculum development, table 3.1 deliberately polarizes and compares the assumptions and tenets inherent in the technical model and those inherent in the TGfU model. The dichotomy offered in this table is one that could apply equally to other areas of the curriculum, such as reading and writing, in which a similar dialogue is in progress with regard to phonics and whole language.

In essence, the technical model is based on behaviorist learning theory, which advocates the use of direct instruction by teachers, who are the "keepers of knowledge" who will "transmit" information to "receptive" students (Allison & Barrett, 2000). The constructivist TGfU model, conversely, uses conceptual and transactional instruction. Students are viewed as thinkers with emerging theories about the world. Teachers investigate the students' points of view to understand students' present

Table 3.1 Comparison of the Technical Model and the TGfU Model

	Technical model (behaviorist)	TGfU model (constructivist)
Why it is taught (philosophical and historical perspectives)		
Culture	Factory/product model	Village green/progressive education
Belief system	Dualism	Integration of mind, body, and spirit
Context	Isolation; links with coaching and professional sport	Integration of school and community
Training	Efficiency/military influence	Movement education
Experience	Specialism/sport	Integration and inclusiveness
What is taught (curriculum)		
Purpose	Acquisition of knowledge	Construction of meaning
Objective	Defining what we know	Discovering what we don't know and applying what we know
Outcome	Performance	Thinking and decision making
Game frameworks	Seasonal activities	Classification
How it is taught (pedagogy)		
Instruction	Teacher centered	Student centered, developmental, progressive
Strategy	Part–whole	Whole–part–whole
Content	Techniques based	Concept based
Context	Teacher–student interaction	Multidimensional interaction
Teacher role	Transmission of information	Facilitation of problem solving
Learner role	Passive learning	Active learning
Evaluation	Mastery	Demonstration of understanding and contributions to process

From J. Butler, 1998, Factory vs. village green. Two approaches in teaching games education. *Education for life.* Association Internationale des Ecoles Superieures d'Education Physique. World Convention Proceedings. New York. By permission of R. Feingold.

In the same way that a worthy opponent helps define and refine the skills of each player, it is our hope that this comparison will help separate out the distinguishing characteristics of these models and illustrate their impact on the games experience for students.

conceptions for use in subsequent lessons (Brooks & Brooks, 1999). For the purpose of this discussion, the two extremes of these models are polarized in table 3.1, with the understanding that in reality, most school curricula lie somewhere between these extremes. In the same way that a worthy opponent helps define and refine the skills of each player, it is our hope that this comparison will help separate out the distinguishing characteristics of these models and illustrate their impact on the games experience for students.

Curriculum (What Is Taught): Comparing the Technical Model With the TGfU Model

Table 3.1 presents three areas of consideration in building a course of study:

1. Why it is taught (curriculum theories based on philosophical and historical perspectives)
2. What is taught (the curriculum model based on the why and conceptual framework—see table 3.2)
3. How it is taught (pedagogical perspectives including action and reflection)

Keep in mind that curriculum theories are based on assumptions about society, humanity, and education. Curriculum models represent the operational mode of these theories. This chapter will highlight only the curriculum section (what is taught) of table 3.1 and will consider the purpose, objectives, outcomes, and frameworks of each model and their impact on students. The curriculum theories embedded in the *why* section of table 3.1 are left for another, albeit necessary, discussion.

Purpose: Acquisition of Knowledge Versus Construction of Meaning

The purpose of the curriculum is derived from a set of values and beliefs and is a paramount consideration for its designer (Butler, 1998). The underlying question is, Why do we teach games? (Bunker & Thorpe, 1986).

If the purpose is to train students to replicate certain behaviors or skills, then the technical approach, based in behaviorist theory (i.e., stimuli and reinforcements), works well and fulfills the purpose of teaching games, which is seen as acquiring knowledge.

If the purpose is to train students to replicate certain behaviors or skills, then the technical approach, based in behaviorist theory (i.e., stimuli and reinforcements), works well and fulfills the purpose of teaching games, which is seen as acquiring knowledge. Content is broken down into small steps that are then modeled for students who practice them in efficient drills. This allows the teacher maximum time to provide both positive and corrective feedback to each student. The focus is on psychomotor learning, with cognitive learning as a second priority (Metzler, 2005).

If developing deeper understanding, synthesis, decision making, and the ability to use information in a variety of situations is the main purpose of the curriculum, the TGfU model is a better fit than the technical model because it encourages students to construct meaning from the situations in which they are placed. In other words, to encourage students to apply game skills effectively in the context of playing will require attention to a deeper understanding of the game, as provided by TGfU. As Griffin and colleagues (1997) suggested, students using this approach are less likely to ask, Why are we doing this? or When can we play a game? As seen through the constructivist lens, learners make sense of their world by synthesizing new experiences, in a process Piaget and Inhelder (1971) referred to as assimilation and accommodation. Therefore, the purpose of teaching games is to enable students to construct meaning in games education.

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Objective: Defining What We Know Versus Discovering What We Don't Know and Applying What We Know

In the technical model, the teacher's objective is to teach the student the information effectively and efficiently. This can be summed up as *transmission.* One can recognize the influence of early 20th-century military

and efficiency models in a transmission approach to teaching. Embedded in it are assumptions that all students start with the same knowledge, learn at the same rate, and will learn using this style. In contexts in which players are highly motivated, such as voluntary play situations, the teacher or coach can move efficiently through the skills, thus defining what players know.

The teacher's objective in the TGfU model is to offer all students, regardless of ability or skill level, the opportunity to actively experience, enjoy, and understand games. Student behavior is much less predictable when the TGfU approach is used (e.g., when students are engaged in making tactical decisions in a modified game). Although students may be learning in ways the teacher is unable to foresee, the teacher can channel students' experiences through a process that Kirk (1993) described as "curriculum work as craft." Students are encouraged to listen, explore, discuss, and create ideas. Students' assumptions are challenged, and their decisions are negotiated.

Although many teachers report "understanding" as their primary objective, many don't scaffold or make connections to allow students to truly make sense of what they know and what they're discovering and learning. Many teachers use skill drills out of game context or allow students to "just play" without purposely ensuring the building of connections between skill acquisition and game strategies (Butler, 1997). "Curriculum work does not produce prescriptions for what teachers and students are to do, but provides provisional strategies" (Jewett, Bain, & Ennis, 1995, p. 123).

Outcome: Performance Versus Thinking and Decision Making

The expected outcome of the technical model is that students will become skillful performers. They are also expected to be orderly, compliant, and respectful so that they can learn what to do and how to do it. For example, students may be assessed in a soccer lesson on their ability to execute a kick using the inside of the foot to make accurate and short passes. Various rubrics delineating criteria of this skill will be rated according to the student's performance. If we can imagine this taking place in a fourth-grade class, we can also imagine the application of this in a game. Often students assume that their role in the game is to kick the ball because that is the focus of the lead-up skills practice. They end up replicating bees around the honey pot!

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TGfU's shift in focus—from *how* to *why* or *what if* (Kirk & Tinning, 1992)—encourages students to reflect and to ask questions. As Brooks and Brooks (1999) suggested, when students have to reconsider their prior ideas in the presence of new information to create cognitive structures, deep understanding will occur. Their skills in negotiating, compromising, and listening are developed through small-group work. Students are required to make creative decisions, to question, and to challenge themselves and each other—much like children do at play. The previous example of the soccer lesson would look different in a TGfU class. The assessment focus for student learning would be the thinking process and decision making of the students. Through a process of teacher questioning, students would learn to think about each game situation using the following questions: What is happening here? How do I help my team move the ball upfield? Where should I move?

Through a process of teacher questioning, students would learn to think about each game situation using the following questions: What is happening here? How do I help my team move the ball upfield? Where should I move?

Game Frameworks: Seasonal Activities Versus Classification

The technical model organizes its curriculum in imitation of the seasonal cycles of professional sport. As reported by one teacher in Butler's study (1993),

> The curriculum varies but it stays the same. I mean I think everyone in the fall plays a little football, plays a little soccer. When you start coming inside you do a little gymnastics, you do a little basketball. In the spring there is field and track, you are doing softball, so I think that is pretty traditional. (p. 145)

Werner and Almond (1990) suggested that "offering an extensive variety of sports in one- or two-week units means that students never have time to become proficient" (p. 23). The TGfU model uses a classification system for its framework and bases the inclusion of games on a systematic selection process. Games with similar intents are grouped together (see table 3.2).

Table 3.2 Essential Components of Games Education (Conceptual Framework)

	Target	Striking	Net/wall	Territorial
Main intention of game	To send away an object and make contact with a specific, stationary target in fewer attempts than the opponent.	To place the ball away from fielders in order to run the bases and score more runs than the opponents.	To send the ball back to the opponent so that the opponent is unable to return it or is forced to make an error. Serving is the only time the object is held.	To invade the opponents' defending area to score a goal while simultaneously protecting own goal.
Concepts and skills	Sending away Skills: drive, release, deliver	I. Placement of the ball in the field Skills: striking, body positioning, hand positions on bat II. Decision making Skills: observation, listening, receiving, throwing III. Covering bases Skills: sprinting, ready position, moving sideways IV. Base running Skills: sliding, sprinting	I. Spatial awareness Skills: throwing, catching on bounce and volley, serving and receiving serve II. Positioning on court Skills: running, stopping, changing directions III. Position of body Skills: balance, footwork, hitting the ball in relation to the body IV. Trajectory Skills: throwing, catching V. Depth Skills: hitting with specific force, lob shot, drop shot, spin shots, volley, drives, dig VI. Angles Skills: control of racket, angle of racket, volley, forehand and backhand	**Offensive Concepts** I. Keeping possession Skills: sending, receiving, traveling II. Penetration/invasion Skills: accurate passing and receiving, dodging, change of speeds **Defensive Concepts** I. Zoning, defending players in area Skills: shuffle, change of speed, running in different directions II. Defending a specific player Skills: footwork III. Transposition concepts Skills: peripheral vision, footwork, running, quick change of directions
Players' roles	Same skill required for all players; no interaction	Variation in roles for defensive team (e.g., pitcher, catcher)	All players require same skills as they rotate positions (e.g., all serve and receive)	Designated goalkeeper; defensive and offensive role or player; midcourt (both roles)
Playing area	Playing area shared; players take turns; variations from golf courses to ice sheets	Area is shared; offensive team has designated track to run; running track varies	Area is divided by a net; opposing players are separated	Area shared by all players; rectangular; often outdoors
Offensive strategies	Hitting a target: archery gold; bowling jack; curling button; golf hole; pool pockets; skittles pins	Fielding positions; forcing play; holding runner from stealing; staying on offense; keeping turn for as long as possible OK	Placing ball farthest away from player(s); placing ball close to boundary lines; moving to volley position at net; intercepting; anticipating; employing spikers	Keeping possession; moving ball or puck to specified area; rapid changing from offensive to defensive; transposition—organization of players moving from offense to defense and vice versa
Defensive strategies	No defensive strategies in individual games. In team games, obstacles prevent own target from being hit.	Stealing; leading; tagging up; quick and accurate receiving and sending skills	Returning object and keeping it in bounds; anticipating where opponents will return object	Intercepting ball or puck before it goes over the line or into the goal; pressuring opponents into making mistakes; closing down distribution options
Examples of games	Archery, bowls, bowling, croquet, curling, golf, pool, billiards	Baseball, cricket, Danish longball, kickball, rounders, softball	Net: badminton, pickleball, tennis, table tennis, volleyball Wall: handball, racquetball, squash	Basketball, field/ice hockey, football, lacrosse, soccer, team handball, water polo, ultimate Frisbee

TGfU Classification of Games

Bunker and Thorpe (1982) categorized games of similar intents into the following headings: invasion, net/wall, striking/fielding, and target sports. Since the publication of the 1982 classification, authors have made various modifications to these headings. To move away from militaristic connotations, Bunker and Thorpe chose to use the term *territorial* instead of *invasion.* Doolittle and Fay adopted the term *team passing sports* in their 2002 publication, *Authentic Assessment of Physical Activity for High School Students.*

Game components used to distinguish the categories include intent, concepts and skills, players' roles, playing area, and offensive and defensive strategies (see table 3.2). With these components in place, the curriculum can be arranged to allow the development and sequencing of concepts and the transfer of ideas and relationships both among games and among the concepts they involve. The common conceptual threads can be presented and mastered in varied contexts. As Thorpe (1989) pointed out, highlighting these relationships increases tactical complexity and greater decision making for students. He suggested that this is what separates the physical education teacher from other providers of games experiences (e.g., coaches and sport leaders).

When read from left to right, table 3.3 (Thorpe, Bunker, and Almond's games classification) reflects a developmental sequence, with target and

Table 3.3 Thorpe, Bunker, and Almond Games Classification

Target	Striking/fielding	Net/wall	Territorial
Archery	Baseball	Net:	Basketball
Billiards	Cricket	Badminton	Football
Bowling	Danish longball	Pickleball	Handball (team)
Croquet	Kickball	Table tennis	Hockey: field, floor, ice
Curling	Rounders	Tennis	Lacrosse
Pool	Softball	Volleyball	Netball
Snooker		Wall:	Rugby
		Handball (court)	Soccer
		Paddleball	Speedball
		Racquetball	Ultimate Frisbee
		Squash	Water polo

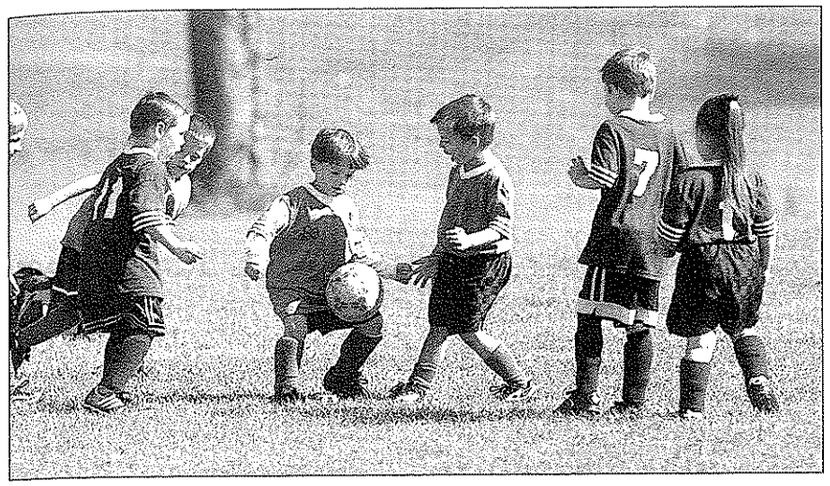

Figure 3.1 Magnet soccer.

striking games followed by net/wall games, which are followed by territorial games. The concept and skills embedded in target and striking games form the foundation for the more conceptually sophisticated and complex net and territorial games. Students need to think and respond more quickly in the continuous nature of net/wall games because striking games allow a team to gather itself between plays. Net games are less complex than territorial games because the opposition is contained in one area. Territorial games move further along this continuum; now the opposition can intersect with all spaces on the field.

Children who have not reached Piaget's third stage of cognitive development (concrete-operational—ages 7 to 8) are unable to think about more than one thing at a time (decenter). When introduced to soccer, they are thus likely to focus on one thing (see figure 3.1). If the teacher has taught kicking, then that is what the students will do, all at the same time! The same types of progressions can be applied to each of the behavioral learning domains: psychomotor—closed skills to open; affective—indirect competition in target games versus direct competition in other categories.

Sample TGfU Games Program

With the conceptual framework in place and values established, the selection and structuring of the program content can now occur. Without such a framework (other frameworks have been offered by scholars, such as

Table 3.4 Games Education Program (Time allocation: one period per week)

	3rd grade	4th grade	5th grade	6th grade	7th grade	8th grade	9th	10th grade	11th grade	12th grade
Fall (Sept.–Oct.)	Manipulative skills development: 1v1 games	Intro. to territorial games	Soccer, hockey	Inventing games	Field hockey, lacrosse	Softball, Danish longball, cricket	Foundation course—sport education	Golf, archery	Soccer, hockey, basketball	Tennis, wallyball
Fall (Oct.–Dec.)	Bowling, skittles	Pickleball (no rackets)	Danish longball, quik cricket	Basketball, hockey, soccer	Badminton, volleyball	Flag football, hockey		Pickleball, tennis, racquetball	Bowling, archery, golf	Flag football, hockey, soccer
Spring (Jan.–Feb.)	Intro. to net games (no rackets)	Basketball, soccer	Floor hockey, soccer, basketball	Pickleball	Basketball, soccer, hockey	Badminton, pickleball		Team handball, soccer, basketball	Badminton, volleyball	Racquetball, wallyball
Spring (Feb.–April)	1v1	Volleyball–3v3	Pickleball (with rackets)	Danish longball, softball	Ultimate Frisbee, hockey, lacrosse	Volleyball, tennis		Volleyball, pickleball, tennis	Basketball, team handball, soccer	Lacrosse, soccer, hockey
Spring (April–June)	Bowling (with angles–intro to wall games)	Intro. to striking games	Kickball	Pickleball, tennis	Cricket, Danish longball	Archery, golf		Softball, baseball, Danish longball	Cricket, softball	Softball, cricket

= Territorial games = Net/wall games = Striking games = Target games

Mauldon & Redfern, 1981; and Ellis, 1983), it is easy to fall into biased selections, choosing games with which we feel familiar or with which we have had more experience. The games education program (see table 3.4) is an attempt to offer a TGfU program for grades 3 through 12 with an allocation of one class period per week. Many programs often allocate a disproportionate 60% to 90% of the physical education program to games education (Fleming 1994; Thorpe, Bunker, & Almond, 1984; Turner & Martinek, 1995; Werner & Almond, 1990; Werner & Thorpe, 1996) and give undue weight to territorial games (Butler, 1993; Jackson, Jones, & Williamson, 1983). A program organized around the following factors will look less cluttered because representations of each category are taught instead of as many games as the program allows. The sample program offered in table 3.4 is a generic example that can be modified to accommodate the specific needs and contexts of any school.

The following factors have been considered when planning the sample program in table 3.4:

1. *Time.* Time is required to develop a game in some depth. Some games need more time than others (e.g., bowling takes less time to understand than basketball).
2. *Focus.* Teachers should focus on a few games at each grade level and let them represent the category (Collier & Oslin, 2001). Less is more.
3. *Sampling.* Children need to experience a number of games to understand their similarities and differences. One game in the classification is selected as the focus for a particular year group, and others from the same classification can be sampled to draw out the similarities. For example, basketball has been chosen as the focus game for the fourth grade (see table 3.4), with soccer as the sampling game. As stated earlier, relationships among the games can be made clear in terms of concepts, strategies, and skills.
4. *Readiness of learners.* Games chosen should be based on the developmental levels of students. For example, as suggested earlier, first- or second-grade students are generally not cognitively ready to learn territorial games.
5. *Intertask transfer (of skills, concepts, and strategies).* The curriculum should maximize the transfer of learning that occurs from one game to another within the classification (and, to a lesser extent, to games from other classifications). For example, the ability to pass to an open teammate and move toward the goal for the return pass (give and go) can be applied to most territorial games.
6. *Intratask transfer (of skills, concepts, and strategies).* The curriculum needs to be arranged so that skills and concepts learned in each game transfer to the next level of difficulty within that game. Skills taught should be given adequate time and should be quickly employed in an appropriate game situation. Central to the TGfU model is the creation of practices that have transfer potential. This will be determined by the "similarities between one practice situation and another or between a practice and the real game" (Launder, 2001, p. 21).
7. *Spiral curriculum* (Bruner, 1977). The ideas, concepts, and strategies within the four categories should be revisited each year. Weight should be given to unifying ideas rather than to any specific game. Each year, the curriculum "spirals" to more advanced levels of instruction and new materials.
8. *Standards.* National, regional, and state/county standards will be an important consideration here (e.g., NASPE, 1995; National Curriculum Council, 1992; Ministry of Education, Singapore, 2003). A conceptual framework such as the TGfU model can provide easy connections between the games program and designation standards.

The TGfU Model and Its Steps

Bunker and Thorpe (1982) first published the TGfU model for games teaching in the *Bulletin of Physical Education.* Butler (2002) adapted it by adding material related to Rink's (2002) four stages of developing game play. A quick glance at figure 3.2 shows that the TGfU model starts the learning focus with the equivalent of stage 3 of the traditional approach—step 1 of the TGfU model. Step 1 is the playing of (modified) games emphasizing learning on tactical awareness and decision making. The beginning of the traditional approach starts the learning process with stage 1 emphasizing skill acquisition before being given access to the game.

The following are Rink's four stages of game play:

Stage 1 Developing control of the object
Stage 2 Complex control and combination of skills
Stage 3 Beginning offensive and defensive strategies
Stage 4 Complex game play in the context of the TGfU model

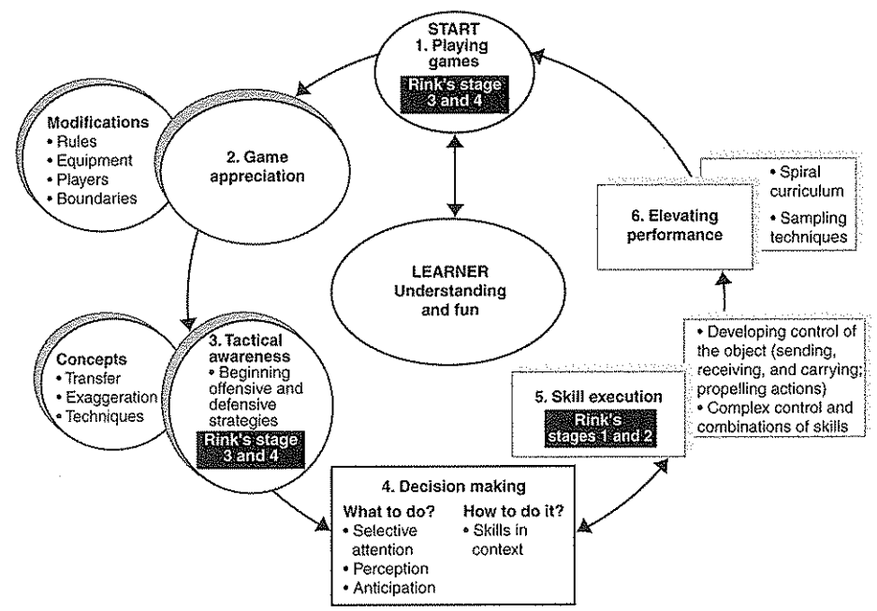

Figure 3.2 Model for games teaching.

Adapted, by permission, from D. Bunker and R. Thorpe, 1982, "A model for the teaching of games in the secondary school," *Bulletin of Physical Education* 10:9-16.

In essence, the TGfU model reverses the traditional order of teaching games and thereby "enables students to learn about the game and practice the technique within the context of a game rather than separate from it" (Thorpe, 2001, p. 23). The game and its tactics are central to the lesson, rather than tagged on to the end or left for extracurricular practice time.

The steps of the TGfU model are as follows:

1. *Game.* All students are able to play the game. Margaret Ellis (1986) outlined the benefits and means of "enabling" every child to participate, regardless of skill level, by modifying such things as rules, equipment, playing areas, and group size.
2. *Game appreciation.* Students learn to understand and respect the necessity of rules because they create, implement, and refine them.
3. *Tactical awareness.* Students come to know and understand the game through solving problems as they are presented in game situations.
4. *Decision making.* Students learn to make good decisions by practicing the elements of decision making. These elements include paying attention to relevant actions (selective attention), anticipating responses by opponents, and choosing appropriate skills (those that will implement the decision most effectively).
5. *Skill execution.* Students are motivated to learn skills because they are learned in context and practiced after the game is played. The skills then enhance game play performance and help students implement the chosen strategy.
6. *Performance.* The level of student performance increases as the cycle continues.

Implementing the TGfU Model

Following are some points that teachers may find helpful as they consider the implementation of a TGfU model within a potentially revitalized games education curriculum. These guidelines are the result of teacher feedback from workshops and from personal experience.

1. Clarify your own educational philosophy. This will help guide your educational decisions.
2. Compare the ideas that make up your educational philosophy with those of others (see Metzler's *Instructional Models for Physical Education,* 2005).

3. Decide what learning outcomes are being sought and determine what kind of learning environment is most likely to foster them.
4. Start with one cooperative class.
5. Start with an activity with strong content and one with which you are comfortable.
6. Combine efforts with other physical educators (not necessarily in the same institution) so that you can share ideas, materials, content knowledge, problems and solutions, experiences, and frustrations.
7. Seek administrative support for implementation, in terms of in-service work, conference attendance, visits to other programs, and moral support. As Brooker, Kirk, Braiuka, and Bransgrove (2000) suggested, the approach must be implemented in "conditions that are receptive and supportive."
8. Involve school district curriculum planners; bring them into the philosophical discussion of values in education and the merits of the TGfU model.

Conclusion

To bring physical education into the present millennium, teachers such as Mr. Pettitt will need to engage in a paradigm shift that makes heavy demands on their energy and motivation. Curricular change is inherently a stressful process. However, the benefits over time can be great. TGfU, with its emphasis on the values of learner-centered teaching and outcome-based planning, is an instructional model that will enable teachers, students, parents, and administrators to promote the holistic and transformational education of children "through the physical." When considering the benefits that the model brings, it is nonetheless important to remember that it is more like a lifestyle change than a "magic bullet medication."

Although TGfU addresses many of the problems inherent in our current physical education programs, it is a process rather than a prescription. The point is not to simply replace a current curriculum with a TGfU curriculum—to jump on the bandwagon, as it were, and let it carry us blindly along for the next few decades. If we believe that it is good for our students to debate and negotiate, to invent and refine—to put understanding at the core of the educational experience—then it should be good for curriculum designers as well. Although it is tempting at times to wish that we could codify the "perfect curriculum," the truth is that we are caught up in the organic process of change that constantly transforms all of our social institutions.

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The process of change helps educators to step into learners' shoes and to discern what they believe to be of value. It also helps them teach in accordance with those values. One of the most striking findings of Butler's 1993 study was that, although many teachers believed that learning should be "child-centered," in reality they taught using a directive approach. As Laws (1990) put it, they used a "progressive rhetoric to obscure the continuation of traditional practices" without being aware that they were doing so. After their engagement in the action research program, the actual pedagogy of almost all teachers in Butler's 1993 study was more congruent with their educational philosophy. In other words, those who espoused more progressive beliefs taught more progressively, whereas those who held more traditional beliefs continued to teach more traditionally. If practitioners are offered the opportunity to engage with the curriculum—as Kirk (1993, p. 262) put it, "to learn from experience, to regenerate, and to imagine beyond experience—in a word, to be reflexive"—then goals can be linked with practice in a process that lies at the heart of the constructivist approach.

Discussion Questions

1. Compare and contrast the education priorities, philosophies, and methods of the TGfU curriculum model and other curriculum models used in physical education.
2. What underlying assumptions about society and education are supported by the TGfU curriculum model as compared to other curriculum models?
3. Develop and analyze a basic spiral curriculum for use in a middle or early high school program based on two classification groups. How could intertask and intratask transfer be optimized? Consider seasonal issues in this application.
4. In the implementation of a TGfU curriculum, how is a skill development best addressed?

5. Imagine that you are designing a physical education curriculum for grades 4 through 6. After determining what percentage games education should be present for each grade level, identify the concepts involved in one of the classifications and determine their progressions.

References

Allison, P.C., & Barrett, K.R. (2000). *Constructing children's physical education experiences.* Boston: Pearson Education.

Brooker, R., Kirk, D., Braiuka, S., & Bransgrove, A. (2000). Implementing a game sense approach to teaching junior high school basketball in a naturalistic setting. *European Physical Education Review, 6* (1), 7-26.

Brooks, J.G., & Brooks, M.G. (1999). *The case for constructivist classrooms.* Alexandria, VA: Association for Supervision and Curriculum Development.

Bruner, J. (1977). *The process of education.* Cambridge: Harvard University Press.

Bunker, D., & Thorpe, R. (1982). A model for the teaching of games in secondary schools. *Bulletin of Physical Education, 18,* 7-10.

Bunker, D., & Thorpe, R. (1986). Is there a need to reflect on our games teaching? In R. Thorpe, D. Bunker, & L. Almond (Eds.), *Rethinking games teaching* (pp. 25-34). Loughborough, England: University of Technology, Department of Physical Education and Sports Sciences.

Butler, J. (1993). Teacher change in sport education. *Dissertation Abstracts International, 54,* (02A), 0457. (UMI No. 9318198).

Butler, J.I. (1997). How would Socrates teach games: A constructivist approach to games teaching. *Journal of Physical Education, Recreation and Dance, 68* (9), 42-47.

Butler, J.I. (1998). Factory vs. village green. Two approaches in teaching games education. *Education for life.* Association Internationale des Ecoles Superieures d'Education Physique. World Convention Proceedings, New York.

Butler, J. (2002). Teaching games for understanding: A holistic alternative in games education. In B. Lombardo (Ed.), *Sport in the twenty-first century: Alternatives for the new millennium.* Boston: Pearson Education.

Collier, C.S., & Oslin, J., (2001). Achieving competency and proficiency in physical education. *Journal of Physical Education, Recreation and Dance, 72* (8), 20-22, 33.

Doolittle, S., & Fay, T. (2002). *Authentic assessment of physical activity for high school students.* Reston, VA: National Association Sport and Physical Education.

Ellis, M. (1983). *Similarities and differences in games: A system for classification.* Paper presented at the Association Internationale des Ecoles Superieures d'Education Physique Conference, Rome, Italy.

Ellis, M. (1986). Modification of games. In R. Thorpe, D. Bunker, & L. Almond (Eds.), *Rethinking games teaching* (pp. 61-65). Loughborough, England: University of Technology, Department of Physical Education and Sports Sciences.

Fleming, S. (1994). Understanding "understanding": Making sense of the cognitive approach to the teaching of games. *Physical Education Review, 17* (2), 90-96.

Griffin, L.L., Mitchell, S.A., & Oslin, J.L. (1997). *Teaching sport concepts and skills: A tactical games approach.* Champaign, IL: Human Kinetics.

Jackson, S., Jones, D., & Williamson, T. (1983). It's a different ball game: A critical look at the games curriculum. In L. Spackman (Ed.), *Teaching games for understanding* (pp. 21-24). Cheltenham, England: The College of St. Paul and St. Mary, Curriculum Development Center.

Jewett, A.E., Bain, L.L., & Ennis, C.D. (1995). *The curriculum process in physical education.* Dubuque, IA: WCB Brown & Benchmark.

Kirk, D. (1993). Curriculum work in physical education: Beyond the objectives approach. *Journal of Teaching in Physical Education, 12* (3), 244-265.

Kirk, D., & Tinning, R., (1992). *Physical education pedagogical work as praxis.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Launder, A.L. (2001). *Play practice: The games approach to teaching and coaching sports.* Champaign, IL: Human Kinetics.

Laws, C.J. (1990). Individualism and teaching games: Contradiction of terms. *Research Supplement (8).*

Light, R., & Fawns, R. (2003). Knowing the game: Integrating speech and action in games teaching through TGfU. *Quest, 55,* 161-176.

Mauldon, E., & Redfern, H.B. (1981). *Games teaching: An approach to the primary school.* England: MacDonald and Evans.

Metzler, M. (2005). *Instructional models for physical education* (2nd ed). Tempe, AZ: Holcomb-Hathaway.

Ministry of Education, Singapore. (2003). *Desired outcomes of education.* Retrieved January 10, 2003, from http://www1.moe.edu.sg.

National Association for Sport and Physical Education. (1995). *Moving into the future: National standards for physical education.* Boston: McGraw-Hill.

National Curriculum Council. (1992). *Physical education in the national curriculum.* York, England: Author.

Piaget, J., & Inhelder, B. (1971). *Psychology of the child.* New York: Basic Books.

Rink, J. (2002). *Teaching physical education for learning.* New York: McGraw-Hill.

Thorpe, R. (1989). A changing focus in games teaching. In L. Almond (Ed.), *The place of physical education in schools* (pp. 42-71). London: Kogan Page.

Thorpe, R. (2001). Rod Thorpe on teaching games for understanding. In L. Kidman (Ed.), *Developing decision makers. An empowerment approach to coaching* (pp. 22-36). Christchurch, New Zealand: Innovative Print Communication.

Thorpe, R., Bunker, D., & Almond, L. (1984). *A change in focus for the teaching of games.* Paper presented at the Olympic Scientific Congress, Eugene, OR.

Turner, A., & Martinek, T.J. (1995). Teaching for understanding: A model for improving decision making during game play. *Quest, 47,* 44-63.

Tyler, R. (1949). *Basic principles of curriculum and instruction.* Chicago: University of Chicago Press.

Werner, P., & Almond, L. (1990). Models of games education. *Journal of Teaching in Physical Education, 61* (4), 23-27.

Werner, P., & Thorpe, R. (1996). Evolution of a model. *Journal of Teaching in Physical Education, 6* (11), 28-34.

chapter

4

Teaching and Learning Games at the Elementary Level

Steve Mitchell

Second-grade students enter the gymnasium for their physical education class in pairs. They collect their own equipment, set up their own small playing areas, and commence activity without intervention by the teacher. They are playing net games, and activity is purposeful with students engaged in solving problems posed by the game performance of opposing classmates. The teacher encourages problem solving through well-designed questions intended to foster critical thinking (for example: "If Matt is back there (deep in the court), where can Katie throw to make it harder for him to get the ball?"). After some thought Katie identifies an area of open space, and play continues with players trying to hit open spaces.

The previous scenario is very plausible but rare. Instead students more often enter the gymnasium and sit in a circle or on a spot while the teacher explains activities. This is particularly the case in games instruction.

Elementary physical education curricula typically introduce sport or games content at the second- or third-grade level. This introduction usually takes the form of teaching and learning manipulative skills through drill-type activities, which will lead eventually to game play. In fact, I have heard some physical educators express the opinion that children as young as second grade are not capable of game play and should be restricted to skill practice only. Needless to say, I disagree with this viewpoint and