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Skills, strategies, sport, and social responsibility: reconnecting physical education

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Physical education is one of the more difficult subjects in the curriculum for generalist class-room teachers in primary schools to incorporate confidently into their teaching. In many primary schools, the generalist classroom teacher defers to a physical education specialist. This situation has both positive and negative features. In this context, this study brings together several prominent models of physical education teaching in an approach that enables the curriculum to be encountered through the interests of the children. This approach offers a generalist teacher, through appropriate professional development, a means for delivering a high-quality physical education programme, and also complements the repertoire of the specialist physical education teacher at both primary and secondary school levels.

Keywords: curriculum development; educational philosophy; physical education; social development; teaching methods

Physical education and the generalist classroom teacher

In this paper, we examine certain issues in the context of our work with pre-service teachers, practising teachers, and children. Many of these issues have arisen from the sometimes naive but always insightful comments of pre-service teachers about the hurdles they face in moving from student to teacher of physical education. Most of these pre-service teachers eventually practise as generalists, not physical education specialists, within primary schools in Victoria, Australia. This situation prompted us to find solutions that do not require the creation of a significantly separate physical education culture, which often exists in secondary schools and can be found in primary schools with a specialist physical education teacher. We try to align physical education teaching with the strengths of the generalist classroom teacher that emanate from their understanding of how to work with children, creatively planning and implementing strategies to make complex content accessible. This is in contradistinction to the separate role of the specialist physical education teacher in primary schools, who has major concern for only one part of a child's education, a situation that can tend to 'delegitimize physical education within the primary school curriculum' (Hickey 1995: 7). It is worth noting here that 'generalist' and 'specialist' are terms usually

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understood in relation to the curriculum, but when understood in relation to the children in a particular class, these terms could quite legitimately be exchanged: the generalist classroom teacher is actually the specialist in understanding the children in his or her class.

Acknowledging the generalist classroom teacher as a significant provider of physical education raises questions about not only the pre-service education of teachers in physical education, but also the ways in which physical education is itself conceived and taught. How can physical education be (re)conceptualized, and physical education teaching (re)structured, to engage the strengths of a generalist classroom teacher, instead of isolating physical education in the hands of a specialist? We attempt to improve health and physical education outcomes for children by examining the *teaching* of physical education, rather than looking to simply replace the *teacher* of physical education.

The difficulties faced by the generalist classroom teacher in teaching physical education are exacerbated by the overwhelming attention paid to the various components of physical education in the curriculum. In the Australian primary school setting this is most evident in the distinctions often made among games, dance, and gymnastics, each forming a separate area of specialization requiring particular expertise. Other distinctive parts of physical education are often identified: athletics, aquatics, and outdoor activities being among them, as seen in figure 1. These divisions add to the burden of expertise required of the generalist classroom teacher, and thereby provide further justification for the seemingly inevitable trend towards more specialist physical education teachers in primary schools.

Is there, we ask, another way of conceiving physical education teaching that reduces the reliance on highly-developed content expertise across at least some of these component parts of physical education?

Going out for a game

Generalist classroom teachers, responding to the difficulties they perceive in teaching physical education, frequently focus on games which the children usually enjoy and which can more readily be adopted without a high degree of specific content expertise. These games lessons are often conducted in a piecemeal fashion, with few apparent longitudinal aims beyond enjoyment and involvement in regular physical activity—laudable, but many would claim insufficient. Critical appraisal of this form of physical education has resulted in plans to incorporate more teaching of specific skills and physical fitness to heighten the perceived and actual benefits of physical education for children (Department of Education and Training 2003). It is assumed that more direct teaching of skills and fitness will increase the likelihood of children participating in organized sport and other physical activity beyond the physical education lesson.

For many generalist classroom teachers this focus on skills and fitness is at odds with playing games that attend to the children's immediate interests. Games hold more personal meaning for children than involvement in skill drills or fitness-training sessions; they often engender more enthusiasm and
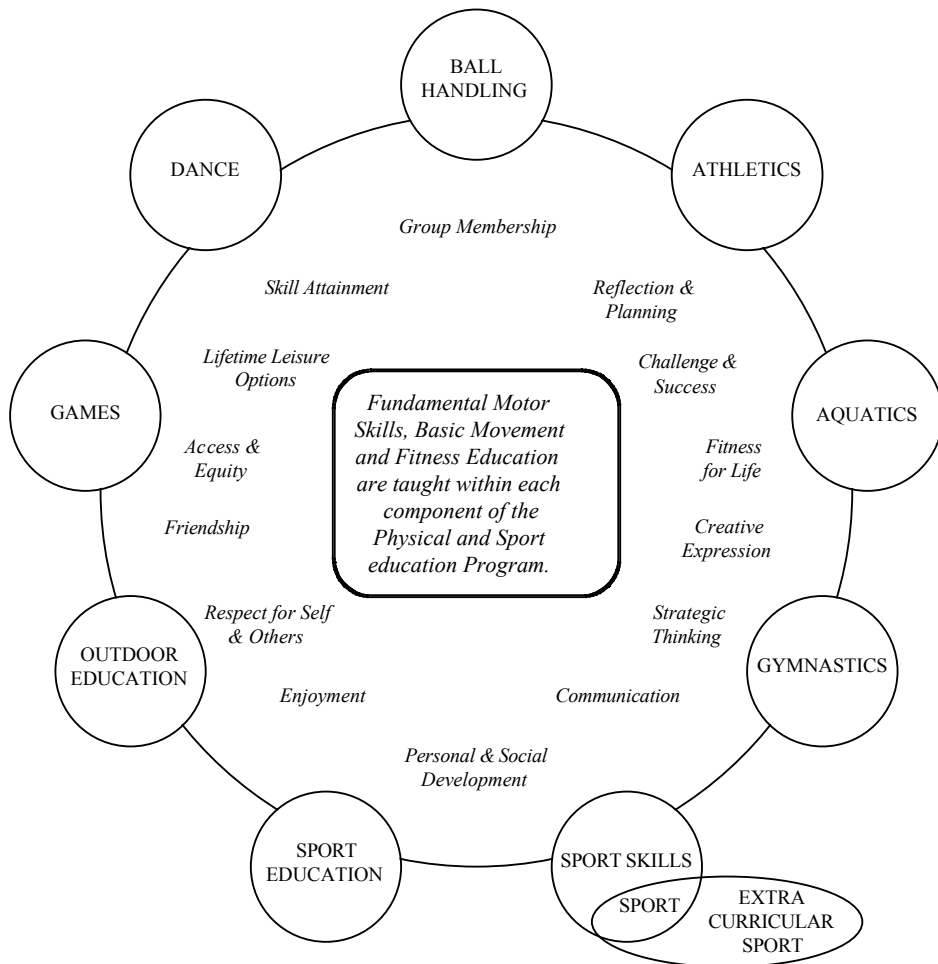
Figure 1. The components of physical education identified by the Australian Council for Health and Physical Education, Victorian Branch.[1]

increased participation. A game is primarily a social event, in contrast to a skill drill or fitness session wherein the need to perform as an individual in relation to particular skill benchmarks is the major incentive. These individually focused situations can often marginalize children, overtly ranking them in a win–lose scenario that seems, for many, to have little connection with life beyond the physical education lesson.

Skills and fitness *are* foundational outcomes in physical education; however, our concern is that existing teaching methods approach these outcomes in ways that do not adequately encompass the child's interests, and thus fail to create situations in which children can participate in *meaningful* physical activity. Such activity should be derived from their *own* interests, rather than from the demands of assessment and reporting (or worse, discipline) that aim to benchmark children against more universal reference points.

Relations between health education, physical education, and outdoor education

Another difficulty for the generalist classroom teacher is the compartmental-ization of the physical education 'field'. Here we point to the divisions between physical education and health education, as well as between each of these subjects and outdoor education, all of which have established their own somewhat separate existence within school curricula in Australia while remaining cognate at a broader level.

A very obvious distinction between these three subjects is the locus of their practice. Health education commonly occurs in a classroom setting; physical education, in contrast, usually occurs in larger, open spaces such as the school yard or gymnasium; outdoor education often takes a step further afield to less formal spaces such as park or bushland. This distinction, cast here simply in terms of place, is underpinned by a more fundamental differ-ence. Each of these subjects embraces a different way of connecting children with the content of the curriculum. Each assumes a different relation between child and curriculum which is made manifest in the teaching practices that we understand to be most prevalent.

The relationship between health, physical education, and outdoor education may be described by way of a continuum. In figure 2, one end of this continuum indicates a version of health education that is particularly intent on transmitting certain health education facts, encompassed within the curriculum, in a way that the children will be able to recall these facts when required. Children, it is assumed, will transfer this classroom-based knowledge to other life situations. Knowing is presumed to lead directly to positive change in aberrant behaviours, a presumption that many teachers realize is difficult to substantiate. Of course, health education is best approached in a more comprehensive manner, using supportive school and community policies and practices to reinforce what may be learned in the classroom. Nevertheless, the classroom-based form of health education continues to espouse an approach to teaching practice driven by universal and relatively abstract knowledge, beginning explicitly with the curriculum and endeavouring to deliver this to the children.

The other end of the continuum in figure 2 indicates a version of outdoor education, often encountered in the later middle-school years, that begins not with any formal knowledge-based curriculum but with the interests of the child. Although there are still aims to be met and outcomes to be achieved, they are clearly approached with the children's interests uppermost in the
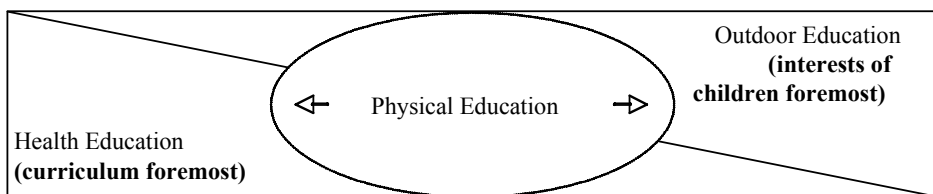

Figure 2.   A continuum of teaching practice in health, physical, and outdoor education.

teacher's mind. The teacher is intent on creating a relatively long-term situation that caters to the children's interests, sometimes devoid of any specific reference to more formal curriculum content, an omission that extends from what Brookes (2002: 421) describes as the failure of outdoor-education discourse 'to explore properly its curriculum potential'. There are, of course, outcomes intended for this experience, but they are often difficult to represent in the usual language of a formal curriculum that often espouses abstract knowledge.

Physical education seems to teeter between each end of the curriculum, sometimes aligned with children's interests, especially when games are played, at other times aligned with the more formal curriculum, as during skill drills. Is there a way in which the children's interests and the relevant curriculum content can be intimately entwined so that desired ends are met? Can physical education teaching be conceived in such a way that children's interests can be accommodated and relevant and appropriate outcomes achieved, beyond simply those of enjoyment and basic participation in the physical education lesson?

Dewey's endeavour to connect the interests of children with the curriculum

Our initial examination of these questions was informed by the approach, prevalent in much middle-school outdoor education, that begins with the children's interests. Philosophical justification for such an approach in outdoor education is located in the discourse of experiential education, the foundations of which are commonly attributed to John Dewey. Dewey's vital contribution to experiential education was underscored by Crosby (1981: 14; emphasis in original), who observed that 'Dewey's metaphysical and epistemological starting point in experience *as felt*, rather than as objective, leads to a very clear philosophy of education which is … the foundation of what most people call experiential education'.

Dewey wrote voluminously on educational matters from the late-19th century to the mid-20th century, a particular phase in the history of education distinguished by the conflict between more traditional perspectives that highlighted the importance of the formal curriculum and those that espoused reform emphasizing the children's interests. This was, in Dewey's (1976: 274) terms, 'the case of the child vs the curriculum', an opposition he deemed so fundamental to education that it lay 'below all other divisions in pedagogic opinion'. The hallmark of Dewey's work was his effort to unite the two, a union which began with the interests of the child and *connected* the child with the curriculum through appropriate teaching methods. Dewey (1972: 143; our emphasis) believed this task of joining child and curriculum, a task he described as 'how to use interest to secure growth in knowledge and in efficiency', to be the central responsibility of the teacher, and in fact 'what defines the master teacher'.

It is important at this point to emphasize our move away from a simple child-centred and teacher-centred dichotomy which has 'persisted for centuries' (Cuban 1993: 245). Although Dewey promoted the interests of the

child, he did not suggest that the formal curriculum was of no consequence. In fact, Dewey had grown increasingly disillusioned with the progressive education movement which he believed had fallen into this same dichotomy. Dewey (1938: 18) understood progressive education to be 'a product of discontent with traditional education. In effect it is a criticism of the latter'. As a result, Dewey (1938: 20) recommended an awareness of the ever-present 'danger in a new movement that in rejecting the aims and methods of that which it would supplant, it may develop its principles negatively rather than positively and constructively'.

Dewey (1938: 20) saw a solution to this dilemma in a better understanding of the 'intimate and necessary relation between the processes of actual experience and education'. In the child's experience lay the connection between adult knowledge and skill developed in the past and his or her present and immediate future. This temporal aspect was central to education and experience. And while the child's experience was a major concern, the fundamental task involved connecting the child's present and immediate future with the accumulated knowledge and skill of the past. This was not child-centred vs teacher-centred but rather a temporal continuity between past, present and future that involved both child and teacher.

However, a distinction must be made here between a future closely connected with the child's own present and a distant future, the connections to which are beyond the purview of many children and young people. Traditional educational practice typically views this temporal continuity as placing much of the relevance for learning on a distant past and a distant future that positions children as receivers rather than producers of knowledge and skills.

> The main purpose or objective is to prepare the young for future responsibilities and for success in life, by means of acquisition of the organized bodies of information and prepared forms of skill which comprehend the material of instruction. Since the subject-matter as well as standards of proper conduct are handed down from the past, the attitude of pupils must, upon the whole, be one of docility, receptivity, and obedience. (Dewey 1938: 18)

Dewey advocated a reorientation in education in relation to this temporal relationship between the past, present, and future of the experience of the child or pupil. He raised 'the problem of discovering the connection which actually exists *within* experience between the achievements of the past and the issues of the present':

> We have the problem of ascertaining how acquaintance with the past may be translated into a potent instrumentality for dealing effectively with the future. We may reject knowledge of the past as the *end* of education and thereby only emphasize its importance as *means*. When we do that we have a problem that is new in the story of education: How shall the young become acquainted with the past in such a way that the acquaintance is a potent agent in appreciation of the living present? (Dewey 1938: 23; emphasis in original)

Beginning with the interests of children results in the past becoming an important source of knowledge and skill as *means* of achieving *ends* which exist in the present and which are focused on the immediate future connected with this present. The knowledge and skills encompassed within the curriculum become the means supporting the children's achievement of

their own interests, which the teacher has considered when planning a physical education programme. These interests are not simply activities the children acknowledge they enjoy. Reducing interest to that level omits ends or purposes that, even for children, are much more complex.

A focus on multiple activities has been a mainstay of many physical education programmes that appeal to children's interests. Cothran (2001: 67) describes this style of programme as a 'framework of numerous sport or movement activities offered in relatively short and frequently changing units' which 'holds a near monopoly on secondary programmes with slightly more diversity at the elementary levels'. The purpose of this style of programme 'is to provide students with an exposure to a wide variety of sport and movement while maintaining students interest with its fast changing focus' (pp. 67–68). The programme we describe here is an attempt to advance physical education teaching beyond this simplistic grab for the children's attention.

The interests of children (and adults) are deeper and more purposeful than those that can be contained within short-lived activities alone. Dewey understood the extent of interest to be encompassed more adequately by what he variously termed vocations, occupations, or callings. 'A vocation', Dewey (1944: 307) contended, 'means nothing but such a direction of life activities as renders them perceptibly significant to a person, because of the consequences they accomplish, and also useful to his associates'. He believed an occupation to be 'a continuous activity having a purpose' (p. 309). The importance of the extended time involved and the larger purpose at stake were the key constituting factors. Dewey believed that 'education is not a preparation for vocations; vocations themselves are (more or less) educative, preparing us for more complex vocations, wider experiences, and a richer life' (Higgins 2005: 450). With this understanding in mind we promote the need to (re)structure and (re)conceptualize physical education. Physical education must be continuous and purposeful, *from the children's perspective*. It must encompass some form of vocation, occupation, or calling beyond short-term activities and disconnected skills. This much deeper conception of interest can tap into children's own ideas of what is important in their lives.

A new view of the components of physical education

Because an emphasis on children's interests is a characteristic of outdoor education, we turned first to the teaching methods prevalent therein to determine aspects that may be applicable to physical education.[2] This attempt to identify aspects of the essential structure of outdoor education in relation to this connection between child and curriculum led us to an awareness of the constraints, or limits, placed on middle-school students involved in an outdoor-education camp conceived as a small-group camping journey mainly requiring bush-walking over several consecutive days. The students were faced with a series of constraints that provided boundaries to their experience. These boundaries defined a conceptual 'space' within which they, as individuals but more importantly as a group, had to function. This

space was bounded by basic logistical considerations usually determined in advance by the teacher, such as venue for the journey, campsites, equipment, group make-up, timing, and food.

Within these boundaries the group, usually about half a normal class in number, was charged with accepting the responsibility for completing the journey in a manner that was safe and resulted in maximum enjoyment for *everyone* in the group. Although this task may seem simple in some respects, it involves inherent difficulties that usually emerge in such matters as personal and social development, respect for self and others, friendship, communication, reflection and planning, and indeed most of the other areas listed as dot points within the main circle in figure 1, the diagram that depicts the components of physical education according to the Australian Council for Health, Physical Education and Recreation (ACHPER), Victorian Branch.

We have schematized this diagram in figure 3 to highlight an underlying structure that consists of skill and fitness components in the centre, surrounded by personal and social components (dot points), and then activity components (smaller circles). The personal and social components are topics that contemporary physical education teaching seems to overlook as a major focus, instead highlighting those skill and fitness components of physical education detailed in the central square: fundamental motor skills, fitness, and basic movement. The focus on these skill and fitness components seems to justify using approaches that place primacy on beginning with the formal curriculum to the detriment of the children's interests.

Although the personal and social components are assumed to be significant parts of physical education, the teaching strategies generally applied seem to relegate the achievement of many of those components to classroom management. The teacher directs action and enforces compliance; learning is assumed to occur through obedient submission instead of through a
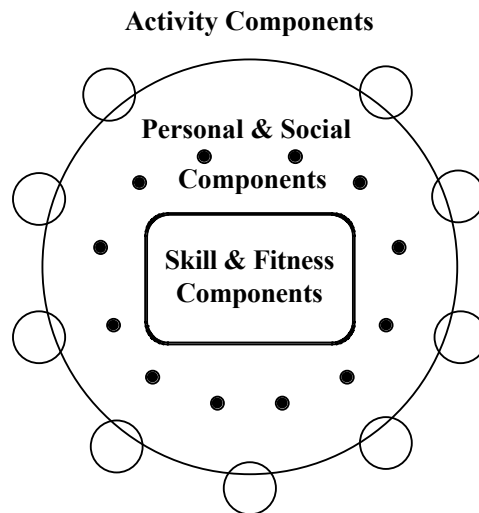

Figure 3. The underlying structural aspects of the components of physical education, adapted from figure 1.

concerted effort to engender understanding of coherent principles. Yet it is among these personal and social components that many of the interests of children relevant to physical education can be found. Much outdoor education is located in the personal and social components. It is also here that many aspects of the curriculum relevant to health education can be placed. By beginning with these personal and social components, and including them in the activity components of physical education, the skill and fitness components may take their rightful place as an *emerging* focus, instead of the driving force, within the practice of physical education.

The activity components, while often construed as connecting with children's interests, are better understood as vehicles for achieving more fundamental ends. Through this understanding, health, physical education, and outdoor education can again find some continuity and common ground in the personal and social components, in spite of the curriculum rhetoric that would force them into separate boxes based on much reduced ends.

Taking personal and social responsibility in physical education (TPSR)

Hellison's (1985) model (see figure 4 is a point of departure for embracing the personal and social components of physical education. The model, structured in six levels, enables a teacher to focus less on classroom management and policing, and more on creating opportunities for children to take responsibility for their own and others' well-being.
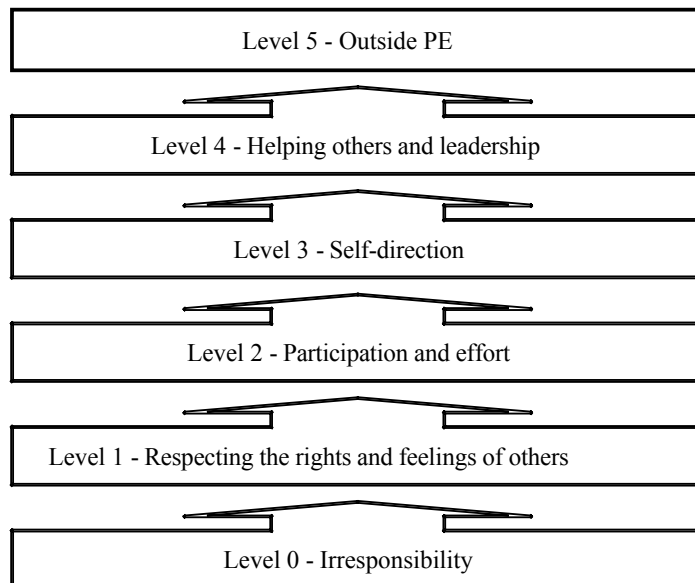
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┌──────────────────────────────────────────────┐
│             Level 5 - Outside PE              │
└──────────────────────────────────────────────┘

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│      Level 4 - Helping others and leadership   │
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┌──────────────────────────────────────────────┐
│             Level 3 - Self-direction          │
└──────────────────────────────────────────────┘

┌──────────────────────────────────────────────┐
│       Level 2 - Participation and effort      │
└──────────────────────────────────────────────┘

┌──────────────────────────────────────────────┐
│  Level 1 - Respecting the rights and feelings of others │
└──────────────────────────────────────────────┘

┌──────────────────────────────────────────────┐
│            Level 0 - Irresponsibility         │
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Figure 4. The levels of responsibility in TPSR, where the aim is for children to move up the levels.

Hellison (2003: 41–53) offers five strategies for implementing this model. The first he calls 'counselling time', which requires a teacher to connect with each child at some stage during the lesson, as well as possibly before and after the lesson, in short but positive and reinforcing one-on-one conversations. The second involves an 'awareness talk to open the lesson', a short talk that reinforces the levels of responsibility. These strategies can be introduced gradually, in their details, over the course of several lessons. The third strategy entails 'integrating teaching responsibility with teaching the physical activities' by including 'awareness talk reminders' in the lesson when appropriate situations arise. The fourth and fifth strategies provide important opportunities for students to reflect on the lesson to improve their own performance, and to provide feedback to the class so that this improvement can occur more easily at a group level. These strategies involve a 'brief group meeting near the end of class' and 'reflection time to close the class'.

Hellison's levels of responsibility, and the associated teaching strategies, form a model which he refers to as 'taking personal and social responsibility (TPSR)' in physical education (p. 4). This model provides a well-structured method that accommodates many aspects of physical education currently approached through often reactionary classroom management strategies rather than through concerted efforts at proactively teaching children how to operate in a group or team. Underlying any attempt at applying the TPSR model is the creation, by a teacher, of opportunities for students and children to interact socially. It is possible to minimize the amount of interaction between children by making use of individual drills or other activities that require only nominal amounts of interpersonal contact, apart from that with the teacher. Enabling children's interests to come to the fore requires a teacher to take a step back, to move off centre-stage, at least for part of the lesson. This does not mean that a teacher relinquishes functional control of the class, but rather that he or she works in a way that creates the space for children to take greater responsibility, as occurs in much outdoor education. TPSR makes this undertaking more achievable by providing a structure that children can understand and work within, a structure that sets clear and coherent expectations which are not solely couched in terms of negative consequences.

Creating and developing games (CDG)

Given the constraints or limits that structure outdoor education, we realized that the three main elements of primary school physical education (games, dance, and gymnastics) could be understood analogously as structured by constraints. According to one state school authority in Australia, games are the most dominant of these three elements (Directorate of School Education 1993: 30). Thus we turned our attention to the games' basic structures that could then be applied as limits or constraints. The aim was to present to children the challenge of actually developing games, in itself a valuable skill. CDG is not, of course, new to physical education; however, the method for creating games that we introduce here offers what are, we hope, new ideas for physical education teachers both in the way the games are created and in the

development and eventual use of the games with other models. We learned much about the practical application of these ideas as we implemented them in a condensed form with middle- and upper-primary children.[3]

With regard to games, the constraints are relatively obvious and include aspects of space, time, equipment, group size, participation, rules, scoring, skills, and, not least, safety. We consider each in turn. The average class of between 20 and 30 students is first divided into four groups or teams, with numbers and performance abilities as evenly spread as possible. Each team is provided with a set of *equipment*, the exact nature of which is determined by the teacher, just as the outdoor education teacher determines similar matters connected with specific educational outcomes for particular students. An example drawn from our own experience involved the use of two mini-basketballs, two plastic hoops, and five flat markers which, combined with the other constraints, could encourage the children to develop games that are variations on a particular theme, broadly determined but not specifically prescribed. Although the use of this equipment may seem to point towards the development of a basketball- or netball-type game, children are very good at discovering options that a teacher, entrenched in the adult understandings of organized sport, can sometimes fail to appreciate.

The *space* each group has at its disposal to develop its game, for example, based on the availability of one basketball court, is exactly one-quarter of the court (four groups sharing the court), which will then expand to half the court for the actual game held in competition with another group. The *time* allocation could be about 5 minutes per game-half, enabling games to be played relatively quickly; this time may be adjusted to accommodate the children's age and other relevant logistical factors. Importantly, this is time for the eventual playing of the game, not for planning it, which would take longer.

The major constraint associated with *participation* requires all team-members to be fully involved in the game: no sitting out. This has ramifications for the eventual shape that the game will take as the abilities of all class members have to be taken into account. The *rules* have to be simple enough for the children to manage without requiring an umpire. This releases the teacher from having to take on an umpire's role, and increases direct participation because students are not required to perform this role, a situation that replicates many recess and lunchtime games conducted by the children in which adult assistance is not required. Any situations that are difficult to adjudicate require the children to develop strategies to solve what are essentially group problems. The TPSR model is of fundamental importance here.

Scoring has to be similarly simple, enabling the children to keep a running score without the need for a special score-keeper. If the teacher deems it necessary, use of specific *skills* could be made a mandatory part of the game, a constraint introduced with the other limits, such as bouncing or kicking. Finally, all aspects of the game are to be kept within the normal bounds of *safety*, minimizing the occurrence of injuries.

With these constraints in place, the next task is to develop the games. Central to this undertaking is the continual improvement of each group's

game. To encourage this improvement, each group must teach its game to another group and play the game with this group, after which it receives feedback, in a pattern structured by the teacher, on important elements of the game as it was experienced. This may work best if two groups, or teams, take turns to share their games with each other. Following this episode of sharing (and, in the process, playing) games, the teacher may return with the children to the classroom where they can write or draw, individually or in small groups, answers to questions posed by the teacher about the other team's game. Alternatively, questions can be developed in conjunction with the children as a framework for evaluating games. These questions may include as a starting point: 'Was the game fun to play?', 'Was everyone always involved?', 'Was the game always safe?', and 'Were the rules and scoring easy to understand?' Each question can be followed by supplementary questions, and rounded off by providing opportunities for children to make suggestions for improvements. Writing and drawing enables children to reflect more intently on their experience than would be possible in a purely verbal exchange, as most commonly occurs in physical education classes. Completed individually at first, the process also ensures that each child's views are obtained rather than just those of the most outspoken individuals.

The often complex responses to these questions are then provided to the other team which would be encouraged to use this feedback in further development of its game, again outside on the court. Because these responses are made available to the other team in a format that can be saved for future reference, this further development can be postponed to another occasion if necessary, and even supplemented by prior team discussion in the classroom. Over several classes, in a round-robin format, each group shares its gradually improving game with other teams, and learns other teams' gradually improving games. During this undertaking the teacher plays a managing role, including aspects of TPSR, providing on-going encouragement, and asking questions to assist students to think through some issues regarding their game. And concomitantly, or indeed leading up to these lessons, other projects may be carried out which support the children in undertaking this process. Investigation of such questions as 'What is a team?', and 'What is a game?' may raise children's awareness of important aspects of the enterprise.

After the sharing of games is complete, with an emphasis on improvement affording, ideally, at least one game of high standard, the teams will be asked, possibly in a classroom setting, to discuss each game and to decide which *one* game the class would like to continue playing. The aim is to reduce the four games to one. Each important aspect of the games could be discussed, including enjoyment, participation, simplicity of rules and scoring, and safety. This discussion may take more than one meeting and involve stages, such as deciding on which two games to pursue first, then putting these games to the test during another outdoor session in an effort to decide which of them will be selected. An option for achieving this aim is for each team to rate each other team's game in relation to the criteria for evaluating the games: fun, participation, safety, ease of understanding. These scores could then be tallied to provide an outcome. This is not simply a class vote; it ideally provides an opportunity to come to a consensus in which everyone

is willing to move forward with the chosen game. Together with these further discussions and trials, improvements can be made to the game that may involve incorporating positive aspects of games not selected by the class.

Another problem often encountered is a child's absence through illness or other unforeseen circumstance. By posing such a problem to the class, imaginative solutions may be found with the children's input, e.g. an agreed handicap system to balance any absence.

This process may be further supported by classroom work in areas bounded by such focus questions as 'How do we make a group decision?', enabling the children to implement strategies they may have learned when attending to topics in other parts of the curriculum, such as conflict resolution, again well supported by TPSR. Such class discussion may create a meaningful focus for achieving outcomes in curriculum subjects such as language arts and civics.

Sport education in a physical education programme (SEPEP)

We continued to exploit connections with outdoor education as we tried to account for the bushwalking and camping *journey*, so important in creating meaning for participating students. The journey is the meaningful whole within which everything else fits. The purpose of outdoor education becomes successful completion of the journey, with various interpretations being discussed before and during the event itself.

In physical education the journey is analogous to the sporting season, well articulated in the sport education model introduced by Siedentop (1994a), also known in Australia as the 'sport education in physical education programme' or 'SEPEP' (Alexander and Taggart 1994: 6). Proponents of sport education have essentially adapted common understandings of the elements of organized sport for use within physical education. Physical education teaching differs in many ways from coaching a sporting team, for instance, through a different focus not so preoccupied with elite sport (Kirk 2004), through often vastly dissimilar staff/student ratios (coaches usually having the luxury of working with fewer participants than many teachers), and through the use of smaller teams than is traditional in many sports.

The demand for 'full participation' that Siedentop (1994a: 12) pursued through SEPEP is best approached through the game design itself, an undertaking that, as we have suggested, can and should involve the children. The limits we have specified as constraining and directing the design enforce full participation as a central feature of the game. In addition, we have removed the requirement, normally associated with SEPEP, for assigning diverse official roles to children, such as that of scorekeeper and referee, believing that these roles can be performed by all the individuals involved in playing the game. This is particularly so if the game is designed to ease scoring and rule-based decisions. This is more consistent with TPSR, a central objective of which 'is for the players to engage in competition without having to abrogate responsibility' (Hastie and Buchanan 2000: 27), responsibility that should encompass decision-making between teams about the application of rules.

It is not our intention here to provide a comprehensive exposition of sport education; however, iteration of the main elements sheds some light on its importance to physical education teaching that begins with children's interests. Siedentop (1994a: 8) notes that sport education highlights 'six primary features' that 'characterize institutionalized sport and give sport the special meaning that makes it different from other forms of motor activity'. These features, detailed in figure 5, are seasons, affiliation, formal competition, culminating event, keeping records, and festivity.

Of major importance is the *meaning* provided to physical education, for the children, through the SEPEP model. As noted previously, a sport season is similar to a bushwalking and camping journey. The season consists of multiple days spread within a longitudinal structure that must constitute a 'significant experience' for children (Siedentop 1994a: 9). This is not a single lesson; it may continue for two school terms, sometimes more, sometime less, depending on the children's age and other constraints on the teacher's ability to spend time with a class. We have provided a more detailed representation of a possible physical education programme using this structure in table 1. This structure provides a way, as Dewey (1972: 143) recommended, to 'use interest to secure growth in knowledge and in efficiency' and thus to achieve Dewey's benchmark for 'master teacher'.

Each feature of SEPEP caters to the formation of this significant experience for children. Affiliation with a team provides '[m]uch of the meaning derived from sport participation and a large part of the personal growth that can result' (Siedentop 1994a: 9), and this affiliation itself only has meaning within a formal competition. This aspect of team affiliation has important ramifications for the initial make-up of teams, a task normally undertaken by the teacher and one that benefits from the well-developed understanding of the class possessed by the generalist classroom teacher. In a study focused
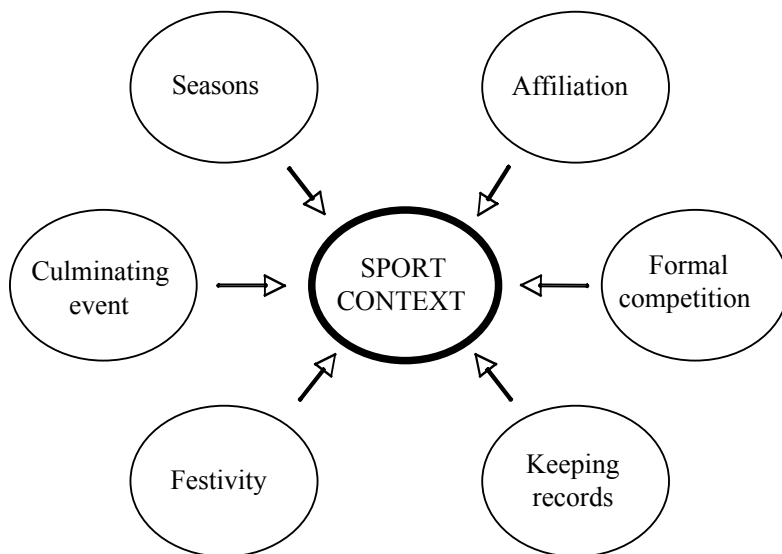

Figure 5.   The six features of sport education.

Table 1. A possible physical education programme (CDG refers to creating and developing games; brackets refer to implicit presence of model).

School term A		School term B	
Week 1	Introduce TPSR	*Week 1*	Revising rules
TPSR	Introduce CDG	TPSR	Practice games
SEPEP	Introduce SEPEP—teams	SEPEP	Devising strategies
CDG	*What is a team?*	CDG	Practising strategies
(FMS)	*What is a game?*	TGFU	
(TGFU)		(FMS)	
Week 2	(4 games)	*Week 2*	Practice/warm-up games
TPSR	Making/playing games in teams	TPSR	Rounds 3 & 4 competition
SEPEP	Teaching games across teams	SEPEP	Revisit ladder/statistics
CDG	Reviewing games	TGFU	Review games
(FMS)		(FMS)	
(TGFU)			
Week 3	(4 games)	*Week 3*	Introduce FMS
TPSR	Improving games	TPSR	*What is a skill?*
SEPEP	Teaching games across teams	SEPEP	*What are the parts of skills?*
CDG	Reviewing games	TGFU	Investigating our game's skills
(FMS)		FMS	Devising skill practices
(TGFU)			Practising skills
Week 4	(4 games)	*Week 4*	Practice/warm-up games
TPSR	Improving games	TPSR	Rounds 5 & 6 competition
SEPEP	Teaching games across teams	SEPEP	Revisit ladder/statistics
CDG	Reviewing games	TGFU	Review games
(FMS)		FMS	
(TGFU)			
Week 5	(2 games)	*Week 5*	Practice games
TPSR	Deciding on 2 best games	TPSR	Reviewing strategies and skills
SEPEP	Playing 2 best games	SEPEP	Devising practice for strategies/skills
CDG	Reviewing/Improving games	TGFU	Practising strategies/skills
(FMS)		FMS	
Week 6	(1 game)	*Week 6*	Practice/warm-up games
TPSR	Deciding on 1 best game	TPSR	Rounds 7 & 8 competition
SEPEP	Playing 1 best game	SEPEP	Revisit ladder/statistics
CDG	Reviewing/Improving game	TGFU	Review games
(FMS)	Documenting basic rules	FMS	
(TGFU)			
Week 7	(1 game)	*Week 7*	Practice games
TPSR	Playing 1 best game	TPSR	Reviewing strategies and skills
SEPEP	Reviewing/improving game	SEPEP	Devising practice for strategies/skills
CDG	Refining basic rules	TGFU	Practising strategies/skills
(FMS)		FMS	
(TGFU)			
Week 8	Introduce SEPEP—season	*Week 8*	Practice/warm-up games
TPSR	*What is sport?*	TPSR	Round 9 competition (last normal
SEPEP	*What is competition?*	SEPEP	round)
(TGFU)	Devising a season	TGFU	Revisit ladder/statistics
(FMS)	Practice games	FMS	Review games
Week 9	Introduce TGFU	*Week 9*	Practice games
TPSR	*How do we play the game better?*	TPSR	Reviewing strategies and skills
SEPEP	*What is a strategy?*	SEPEP	Devising practice for strategies/skills
TGFU	Practice games	TGFU	Practising strategies/skills
(FMS)	Devising strategies	FMS	

Table 1. *(Continued).*

School term A		School term B	
Week 10	Practice games	*Week 10*	Practice/warm-up games
TPSR	Rounds 1 & 2 competition	TPSR	Final competition
SEPEP	Construct ladder/statistics	SEPEP	Festive situation—certificates/prizes
TGFU	Review games	TGFU	Revision of all elements: social
(FMS)		FMS	responsibility, sport season,
			strategies, skills

on the question of team affiliation in sport education with upper-primary children, MacPhail *et al.* (2004: 120) report that 'the value of team affiliation was such that teams were reluctant to change team make-up, choosing to work through their difficulties rather than give up', a positive sign that reflects the importance of this matter for children. The teams should be well balanced in relation to the children's abilities, both socially and in sporting ability. In that way, teams can be maintained for the programme's duration, an aim supported by minimizing uneven competition, together with the consistent implementation of TPSR.

A culminating event adds to the larger experience of the sport season, based on a game the children have themselves created. Keeping records enables a more informed dialogue or conversation to continue among children between games, and also potentially contributes to assessment. These statistics will be fairly simple, for example, team scores and individual scores, and able to be collected by teams during a game. Statistics sheets made available to each team could be completed at the end of a game—and the children themselves could be involved in determining the game aspects important enough to warrant statistics being kept. A competition ladder would add to this record-keeping, all of course supported by other work in mathematics.

Tied to SEPEP is the important notion of competition. This notion often causes concern in physical education and junior sport as an overt focus on winning seems to encourage unacceptable player behaviour, especially in a school setting. In response to this concern, Siedentop (1994a: 13) highlights what he believes to be an often overlooked and 'deeply important meaning' of competition 'related to the pursuit of competence'. Formal competition provides a meaningful framework within which children, through what they perceive to be their own interest, will strive to improve what they are doing. Furthermore, competition instils a notion of 'striving together' which in turn 'necessitates a respect for one's opponents' (Bergmann Drewe 2000: 57).

Essential here is the structure of the competition. Using a game the children have themselves created, which has built within it the need for full participation, is an important starting point, further accentuating the *ownership* that Hastie and Carlson (2004) believe children feel when operating within sport education. Structuring the competition in a longitudinal way, with practice opportunities as well as competitive games, is also important. Teams that lose one game come to understand, with adequate support from

the teacher, that the next game is around the corner, giving them another chance to succeed, success being connected with their efforts at *practice*. Practice is understood not as an isolated drill but as part of the broader framework of the season. To support these discussions, the question 'What is competition?' can be investigated in class, connecting with other curriculum subjects and tapping into the broader questions about organized and elite sport. In such discussions, a teacher may take the opportunity to reinforce positive behaviours. And, of course, underpinning the SEPEP model is TPSR, enabling a teacher to continue the work of strengthening the ways in which children are working together, both within and between teams.

Teaching games for understanding

Challenging children to find solutions to problems is a central feature of a more holistic version of physical education. This may take the form of posing to children questions that cannot be answered simply with yes or no responses, but rather questions that are more open and require children to think carefully about solutions. This teaching practice is also engaged when children are faced with the dilemma of how to improve their team's performance. The tactical structure of the actual game now requires investigation, focused by the broad question 'What does the team need to do to play the game better?' Highlighting the notion of the team will encourage the children to think about their team tactics and the strategies they use in playing the game as a team. Further supporting this investigation may be exploration of the question 'What is a strategy or tactic?' that may help to clarify for children the nuances of these terms.

This concern with game strategies, and the creation of a model for approaching them in coaching and teaching, is attributed to Bunker and Thorpe (1982) who, building on previous advances, brought together aspects of a growing dissatisfaction with a focus on skills or techniques to develop their model. Thorpe and Bunker (1982: 9) described their alternative model as an '"understanding approach" to the teaching of games', a phrase that evolved into the label of teaching games for understanding (TGFU). TGFU incorporates six basic phases: game, game appreciation, tactical awareness, making appropriate decisions, skill execution, and performance. Their particular relationship is shown in figure 6.

Although others, including Curtner-Smith (1996: 33), have chosen to emphasize the role of 'the four game categories identified in the TGFU games classification system' within game creation, we prefer not to use this framework explicitly. Curtner-Smith details this classification system as '(a) invasion games, (b) net/wall games, (c) fielding/run-scoring games, and (d) target games' (p. 33). These game categories are based on the different strategic arrangements prevalent in many games, which could be taken into consideration by a teacher when the constraints for game creation and development are determined. Nevertheless, the requirement for full participation in the game can be difficult to achieve in many versions of fielding/run-scoring games, and many multiple sets of equipment and smaller team

Figure 6.   The teaching games for understanding model.

sizes may be required in target games and net/wall games. Restricting game creation to one of these categories thus creates difficulties that must be considered. Invasion-type games seem to be the most conducive to CDG in a school physical education setting. Furthermore, children may create and develop games that combine more than one of these categories within a single game, a situation that we believe should be able to occur, especially in the primary school years.

Our experience has taught us that through creating and developing the game, most children have an inherent appreciation of the game and an awareness of the game's basic tactics. Questioning children about these strategies often brings to light insights that reveal a developing intuitive understanding of the game. In their teams children can be asked to identify major game strategies, and in whole-class discussion these strategies can be shared more widely. As the children come to terms with this questioning, there will often be those who, for reasons often connected with interpersonal skills and group dynamics, experience difficulty in articulating their views. Again the TPSR model, consistently implemented, will positively affect the climate of these group discussions, making it easier for all to contribute. Providing children with an opportunity to write and draw about situations related to game strategies may also be productive. Use of other forms of expression, such as role-playing in drama, scale figurines, and models, could also assist children to think through the question of game strategies. A group discussion held after these explorations may then reveal many more of the children's own insights.

The main aim of this growing strategic knowledge is an improvement in the team's ability and, by extrapolation, each team-member's ability to make the appropriate decisions about what should be done, and exactly how it

should be done, in a game: in essence, to enhance game performance. Strategic understanding emanates from participation in practice games between teams, shorter versions of the main games that can be paused by team members at opportune times to discuss tactical questions without upsetting the flow of a formal game. Practice time is made available through the SEPEP model, time which children can use to work through particular aspects of the game and possibly to practice set-plays they have constructed. Various aspects of the game can be explored in teams and this information shared in discussions involving the whole class.

Fundamental motor skills (FMS)

The teaching games for understanding model not only considers strategy it 'also emphasizes skill execution', attest Werner *et al.* (1996: 29), 'but only after a student sees the need for a particular skill'. We believe skills should generally appear not as the initial focus in a physical education programme, but as emerging from within a much larger meaningful context. The importance of these contextual factors in encouraging skill-development has been noted by Alexander *et al.* (1996: 36) who claim, in relation to SEPEP, that 'significant improvements in skill development have been reported, especially for lower skilled students' where 'a combination of longer units of work, increased motivation amongst students as they learn to work effectively in persisting groups, the relevance offered by competition and the removal of the need for teachers to always be organizers and disciplinarians' have been implemented.

Among the original game constraints supplied to children by a teacher may be specific FMS he or she wishes to enhance.[4] In this way these particular FMS are made central to the game. By asking children to include bouncing, for example, right from the start, a game can develop to encompass this skill. And apart from any prescribed skills, others will be relevant to each game. Using the constraints we supplied in the example above in which the equipment involved mini-basketballs, and adding the requirement for bouncing to be included, the likely developmental pathways for the game may include the application of other manipulative skills such as throwing and catching, along with locomotor skills such as running and dodging.

The children can be asked first to identify the main skills relevant to the game, and then to devise practice drills that will assist team members to improve those skills, making use of the practice time provided as part of the season (SEPEP). This work can be supported with classroom exploration of the question 'What is a skill?' Through this investigation children may be asked to examine carefully a particular skill and to deconstruct this skill into its component techniques. This task could be accomplished by using the team structure already in place, with each team examining a different skill. The knowledge gained by each team could then be shared across the class, thereby encouraging a deeper understanding of these skills. Children in teams could also work in pairs, observing their partners in different situations and providing feedback related to the components previously identified. This practice strategy may be developed by the children themselves.

With the teacher supporting this investigation and the creation of practice drills by posing questions to children at opportune times, as well as answering the children's own questions, a structure can develop within the framework of the practice sessions that enables children to master particular skills. Feedback, noted by the Department of Education, Employment and Training (1996: 7) in Victoria as a critical aspect of achieving mastery of any skill, can be provided not only by a teacher, but also by other children, following the team and class investigations of the components associated with particular skills.

The main theme of this approach to learning FMS is that it occurs in a context that has significant meaning for children. This context must involve more than simply aiming to please the teacher and obtaining a good report during a skill-based assessment. Dewey (1984: 56) was well aware of the importance of children having 'an experience of the meaning of certain technical processes and forms of skill' in order to develop 'an interest in skill and "technique"' and used examples relevant to physical education to make his point.

> Boys interested in base-ball as a game thus submit themselves voluntarily to continued practice in throwing, catching, batting, the separate elements of the game. Or boys who get interested in the game of marbles will practice to increase their skill in shooting and hitting. Just imagine, however, what would happen if they set these exercises as tasks in school, with no prior activity in the games and with no sense of what they were about and for, and without such appeal to the social, or participating impulses, as takes place in games! (p. 56)

Skill drills are given meaning within the larger structures of the game and season, supported by the levels of TPSR that promote participation and helping others. Without this supportive context, skill and technique development is meaningful only in relation to teacher-imposed assessment, (re)positioning the teacher as an expert in behaviour management in order that sufficient effort, necessary to acquire the curriculum content deemed important, can be extracted from the children. The master teacher is lost to the children, who in turn become mere pupils, a descriptor of children in formal education that Dewey (1944: 140) believed 'has almost come to mean one who is engaged not in having fruitful experiences but in absorbing knowledge directly'.

Conclusions, and hopes for the future(s) of physical education

We are aware that efforts to connect many of these models have been made by others. Intersections between SEPEP, TGFU, and CDG have been put forward by Holt (2005) who has developed a model which, while pursuing similar objectives to the programme we have suggested, entails significant differences in relation to the detail of how the models are actually combined.[5] Connecting TGFU and FMS is another well-rehearsed marriage. Skills and strategies, or techniques and tactics, have been central to many expositions of the TGFU model. Hopper (2002: 45) cements this

connection, describing TGFU as 'a combined tactical and technique approach'.

Throughout the programme we have described, the five models, TPSR, CDG, SEPEP, TGFU and FMS, in conjunction with the children creating and developing a game, are woven together into a coherent package. No longer do they exist as separate resources on a teacher's shelves, selected according to a particular focus the teacher believes should be taken. Here they are described as supporting each other, and designed to be implemented in a temporal sequence that weaves a meaningful context within which curriculum content becomes a means to the children's own ends, a relation depicted in figure 7.[6]

Weaving together the five models highlights their inter-relationship and the way in which each contributes to a physical education programme. Each model builds on the previous model in the series, and is a prerequisite for the succeeding model, beginning with TPSR, the social setting, as the broadest framework. TPSR is of foundational importance to CDG; children will create and develop games from which will be selected the best game for insertion into SEPEP. SEPEP is situated within the focus of TPSR, reliant on it to achieve its purpose (Siedentop 1994b: 125, Hastie and Buchanan 2000).

The relationship among these models can also be perceived metaphorically as a Russian doll of boxes, one sitting inside the other (see figure 8). All
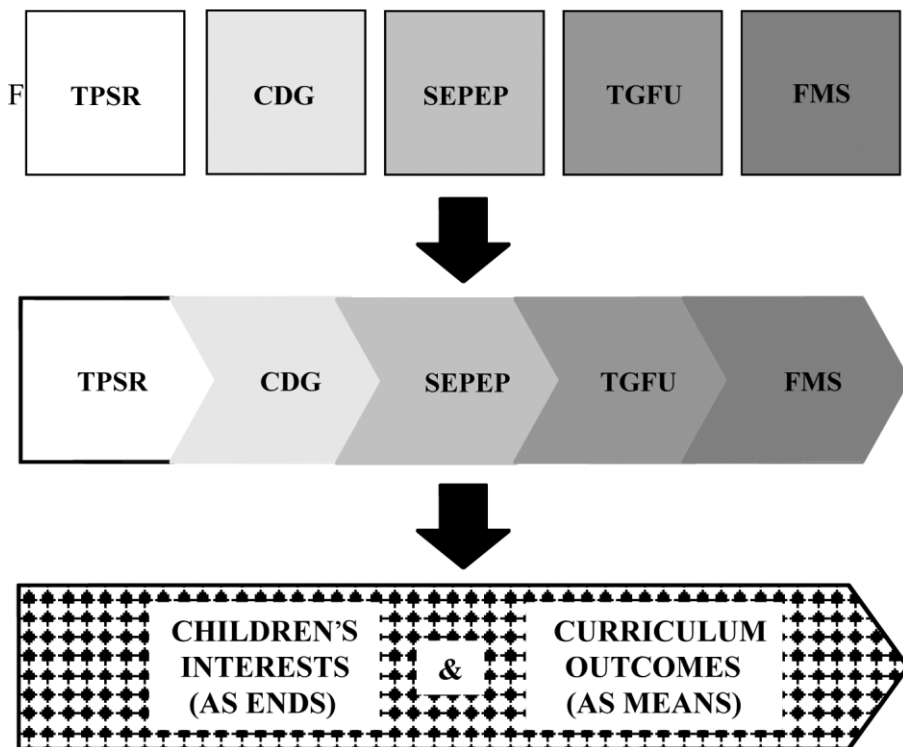

Figure 7. Weaving five models together in a form of cascade that creates a meaningful context.
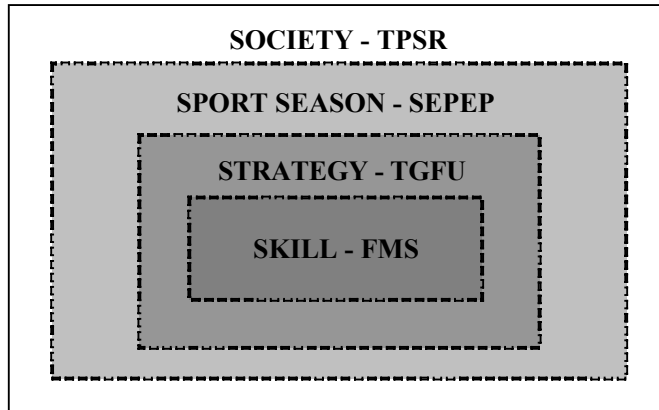
Figure 8.   A nested relationship between four models, connected through the fifth model of CDG.

nest together to constitute a cascade of levels of purpose and meaning for children that, in practical terms, forms a unified whole. Most importantly, this nesting begins not with the smallest doll, the skill or technique, but with the largest doll, the social context, which underpins the deeper and more purposeful interests of the children.

Bringing together these five models could only be achieved by beginning with the interests of children, attempting to connect children with the curriculum through their own interests, and thus through the inherent meaning attributed by the child to the tasks and content involved. This is a process of attribution through *purpose* that the teacher can influence via the structure of the physical education programme. The teacher is always cognizant of the essential curriculum outcomes, but these outcomes must realize the children's own ends if they are to be successfully achieved.

The teaching practices at the centre of this programme enable a connection to be made with children's lives beyond the physical education lesson. Other contexts that engage children in personal, social, and physical ways become intimately connected with physical education. While this includes organized sport, uppermost in our thinking is the link with recess and school lunch-times during which the game (not needing any adult input, and requiring only minimal equipment that can easily be made available) can be played and practised. With a little teacher encouragement and the planting of ideas among the class, recess and lunch-time can become an extension of physical education.

In addition, this more holistic package provides children with the conceptual understanding and social ability to be able to organize their own games beyond the physical education class more successfully, be that at recess, lunch-time, home, or the local park. These understandings and abilities could also play an important role in peoples' lives after their formal years of schooling, enhancing the available opportunities for more informal physical activity. Consequently, this approach goes some way towards responding to aspects of the larger problems concerning the future(s) of physical education raised by Penney and Chandler (2000). A foundational

question enunciated by Penney and Chandler reflects the motivation behind our efforts: 'How can physical education be, in Young's (1998) terms, "more connective" (within the subject, with other aspects of the curriculum, and with lives and societies beyond schools) and express a "lifetime approach" to education?' (p 72). These connections are crucial to understanding the need to (re)structure aspects of physical education in this way. We wish to remove the reductionist and disconnected focus on skills and fitness as the source of teaching method in physical education, a source that has promoted the simplistic use of drills and a blindness that equates physical education with mere physical activity. At the same time we encourage the incorporation of more theoretical content relevant to physical education, such as that encompassed in structural questions about games, teams, strategies, skills, and competition, within other subjects in the curriculum that may be classroom-based, maintaining the maximum amount of time available for children to organize themselves and to play their games, perform their dances, and explore their movement routines.

We are aware that in describing this way of teaching physical education we are not introducing any radically new physical education content. Our aim has been to highlight the connections among various aspects of physical education as they come together in a more holistic way, building from the interests of the children *to* the curriculum in a temporal sense. Here child and curriculum are understood in their connection rather than as separate entities, thus avoiding the either–or question of child vs curriculum that Dewey (1976) identified. Nevertheless, the way physical education is (re)conceptualized here will mean a significant change for teachers and for children, especially if they are accustomed simply to going out for a game. Children often struggle with changes to their routines, and we found that it took several lessons before the children we worked with came to a clear understanding of what it was we were asking them to do.

Finally, we understand that the ideas we have laid out here will continue to develop, changing and shifting as they are applied in various school contexts. Our hope is that these ideas, reconceptualizing physical education teaching in a certain direction, may result in more generalist classroom teachers feeling confident, comfortable, and capable of implementing high-quality physical education lessons, especially if they encounter this approach through 'more extensive pre-service training and ongoing professional development', which Morgan and Bourke (2005: 12) identify as 'necessary, particularly considering the interrelated nature and potential for improvement of the major inhibiting factors to teaching PE (lack of teacher confidence and adequacy of teacher training)'. In the primary school setting, the generalist classroom teacher *must* believe that the possibility of teaching high-quality physical education is within his or her grasp. Where this is not the case, physical education may be disconnected from the rest of the curriculum and from the life of the school more generally. We believe that the approach we have presented here has the potential to enable all teachers who wish to adopt it to be involved successfully in teaching high-quality physical education, without the need to rely on specialists. However, we also consider the approach detailed here to be a valuable addition to the repertoire of those specialist physical education

teachers whose work we value highly at both primary and secondary levels.

Acknowledgement

Notes

1. This diagram was developed by ACHPER Victorian Branch, and appears in a number of its publications. An earlier version of this diagram appears in a publication of the Directorate of School Education (1993: 15), commonly referred to as the 'Moneghetti Report', highly significant in curricular terms, that investigated physical and sport education in schools in Victoria, Australia, associated with a major curriculum restructure.
2. For a more detailed exposition of an outdoor education programme that operates in this way, see Quay (2005).
3. At lower-primary levels we have begun working with dance and movement, adapting the processes so that they are appropriate and relevant to lower-primary children. The basics of the programme described here as it pertains to games are still present: children developing dances or routines, a larger meaningful context that encourages practice and the achievement of competence, and the involvement of the children, through story creation, drawing and other means, in as many aspects of the programme as possible.
4. We are well aware that the use of the term 'fundamental' in relation to motor skills can be contentious, and we do so mainly in line with the popularity of this approach in Victorian primary schools, supported by a resource detailing this model distributed to all Victorian primary schools in 1996 (Department of Education, Employment and Training 1996).
5. We agree with Holt (2005) that TGFU is connected with SEPEP but differ in avoiding the use of the games classification system to predetermine the eventual shape of each game created.
6. We acknowledge that these models of teaching in physical education have generally arisen through a focus on the teaching of games and sports, rather than in dance or gymnastics. Nevertheless, we believe that the basic ideas underpinning each model can be applied, woven together as we have described them, in other components of physical education, including dance and gymnastics.

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