

Situating Ethics in Games Education

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Abstract

This paper posits that Inventing Games (IG), an aspect of the games curriculum based on principles of Teaching Games for Understanding (TGfU), opens up important spaces for teaching social and ethical understanding. Games have long been regarded as a site for moral development. For most teachers, however, ethical principles have been seen as incidental rather than teachable. Preliminary findings from two studies with students and teachers have shown that students can question foundational knowledge, such as constructs around gender, race, and ability, as they work together to design game structures. Thus, IG processes can foreground ethical decision-making in both game construction and game play.

Keywords: ethics, Curriculum Inventing Games, physical education, Teaching Games for Understanding

Précis

Cet article postule que *Inventing Games (IG)*, une unité d'Apprendre et comprendre par le jeu (TGfU), offre de nombreuses occasions d'enseigner la compréhension sociale et éthique. Le jeu a été longtemps considéré comme un lieu de développement moral. Cependant, pour la plupart des enseignants, les principes éthiques sont considérés comme

fortuits plutôt qu'enseignables. Les résultats préliminaires d'une étude de trois ans réalisée auprès d'élèves et d'enseignants ont démontré que les étudiants peuvent remettre en question des connaissances fondamentales, telles que des concepts relatifs au sexe, à la race et à la capacité, lorsqu'ils travaillent ensemble à la conception de structures de jeu. Ainsi, le programme d'études IG peut mener à une prise de décision éthique dans la construction du jeu et dans le jeu lui-même.

“The grand aim of all muscular activity . . .
is to improve conduct and moral character.”

~ Dudley Sargent

Introduction

I believe the above pronouncement, made by pioneer educator Dudley Sargent in the nineteenth century (Phillips & Roper, 2006, p.133), still has considerable currency. Most contemporary PE teachers would argue that as students play games, they practise essential social skills such as cooperation and leadership, they develop character traits such as perseverance and courage, and they come to embrace values such as loyalty and fairness. However, the persistent, tacit belief that games education inculcates ethical awareness has rarely translated into the *design* of PE curricula.¹ Typically, notions such as “teamwork” and “fair play” are left vague and seen as incidental in the traditional games curriculum. In this paper, I argue that an alternative approach, Inventing Games (IG), an aspect of the games curriculum based on principles of Teaching Games for Understanding (TGfU), provides a more productive and considered context for ethical and social education. I support this assertion with data from two research projects—a pilot study conducted 2007–2008, and an SSHRC-funded, three-year research program conducted with teachers and students in Vancouver, British Columbia, and completed in 2013.

Disciplinary Mastery

The current dominant approach to teaching Physical Education (PE) and games is known as disciplinary mastery (Jewett, Bain, & Ennis, 1995). Dominated by a behaviourist view of learning, it uses feedback and reward to change and modify behaviour (Light, 2008). Emphasis is placed on the reductionist isolation of desired learning techniques, which are broken down so that they can be successfully targeted in the teaching situation. As Kirk (2013) suggests

1 There have been notable exceptions (see Hellison, 2003).

The term “technique,” rather than “skill,” is appropriate to describe this form of physical education since it is the decontextualized movements of, for example, passing, dribbling, and shooting, rather than their appropriate thoughtful application in games and sports that form the basic stuff of lessons. (p. 222)

However, as Kirk points out here, successful game play depends upon much more than knowing how to perform techniques “properly” and in isolation. Such things as off-the-ball movement, anticipation, and cooperation can only be fully understood and practised as they are applied within the context of the game, and even then, they can be elusive if the game is not engaging and accessible for all players. In its tight focus upon physical execution and its consequent disregard for the affective, spiritual, and cognitive dimensions of learning, disciplinary mastery ignores the vital connection between mind and body. The lingering effects of Cartesian dualism, in which the mind is privileged, has made some scholars, administrators, parents, and teachers regard PE as an unimportant and even expendable discipline or, at best, a place for students to run around and let off steam. Whitehead (2013) summarized this trend most succinctly:

It is a worry that physical education is sometimes viewed as being just a break from the “serious” work of education and is valued only for the benefits it brings to “rest” cognitive faculties in the interest of learners being able to work better in lessons that follow. This gives the impression that cognitive functions are not used in physical education, which is certainly not the case, and it can lead to the attitude that physical education is just for fun and has no significant contribution to make to education. (p. 26)

Teaching Games for Understanding

Teaching Games for Understanding (TGfU) was developed by a small group of British educators who built on the work of Ellis (1983a), Mauldon and Redfern (1981), and Wade (1967). They believed that traditional games teaching was failing a large percentage of children who left school disliking sport and having achieved little success at it, for

the reasons already stated (Thorpe, Bunker, & Almond, 1986).² In TGfU, the focus is on the game and the player, as emphasis is placed on player decisions, strategies, and tactics. The teacher is the facilitator and the designer of contexts and situations that challenge players, not just physically, but intellectually and emotionally, as they are called upon to decide, for instance, where and when to pass the ball, and to whom, or how members of the team might work together more productively. Players create meaning from the situation in which they are placed. Instead of game play being viewed as an opportunity for individual players to perform discrete skills, it is experienced as a dynamic, unpredictable opportunity for engagement, experimentation, and learning with others.

When the game becomes the teacher, students are engaged in constant social interaction within the community of practice that the game constructs for them. Moment by moment, they must re-evaluate their decisions in the light of the game's evolution. Games may be modified to make them more accessible or more challenging, depending upon ability level, or to exaggerate the concepts, strategies, and skills on which the teacher desires to concentrate. This way, all students can enter the game at their own level of competence and ability. Because they are able to access the game more easily, the focus for students moves from technique acquisition to more conceptually sophisticated material, such as tactics, strategies, team collaboration, ball movement, and off-the-ball movement.

The emphasis in TGfU is on inclusion rather than elitism, transaction rather than transmission, integration rather than dualism, education rather than skill acquisition, discovery rather than representation, concepts rather than techniques, and the demonstration and creation of understanding rather than mastery. These vital differences are summarized in Table 1, which deliberately polarizes two approaches to learning through engagement in games—that of the efficient factory that produces standardized outcomes, and that of the local park that offers a space for engagement in social, open-ended, creative play. As students work together to negotiate decisions, develop strategies, and play more effectively, they develop greater understanding, not just of the game, but also of themselves and each other.

2 It should be noted here that there are many other games-centred approaches (GCA), including games-sense, play-practice (Lauder & Piltz, 2013, games concept approach (Rossi, Fry, McNeill, & Tan, 2007), and the tactical approach (Mitchell, Oslin, & Griffin, 2013). Most had their theoretical origins in TGfU.

Table 1: Two polarized approaches to learning through engagement in games

Properties	Technical model (Behaviourist)	Inventing Games model (Constructivist)
Ontology: Why It Is Taught (Philosophical and Historical Perspectives)		
World View	Factory / product model Compliance, efficiency, and order	Local Park / play education Spontaneity, creativity on the edge of chaos
Belief System	Dualism: a healthy mind in a healthy body	Integration of mind/ body / ecosystem
Context	Isolation, links with coaching and professional sport	Integration of school, family, and community
Training	Efficiency / military influence	Movement education, problem solving
Experience	Specialism / sport	Integration and inclusiveness
Epistemology: What Is Taught (Curriculum)		
Purpose	Knowledge is transferred from teacher to student as inert chunks of information—fixed and absolute	Meaning is constructed by learners in social context—negotiable and emergent
Objective	To define what we know	To discover what is unknown and apply what is known
Outcome	Performance	Thinking, decision-making, democracy, situated ethics
Game Frameworks	Seasonal activities	Classifications
Praxeology: How It Is Taught (Pedagogy)		
Learning Focus	Response learning	Emergent learning
Instruction	Teacher-centred	Student-centred, developmental, progressive
Strategy	Part – Whole	Whole—Part—Whole
Content	Techniques based	Concept based
Context	Teacher–student interaction	Multi-dimensional 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

Research Context

In order to understand the broader educational implications of this spectrum of possibility in games education, it is first necessary to consider the evolution of PE in its socio-historical context.

The late nineteenth century was a time of great nationalism, as developed countries demanded fit populations that could compete on the battlefield and factory production lines (Butler, 2006; Kirk, 1992). Efficiency analysts such as Frederick Taylor (1911) had already revolutionized industrial production by isolating and structuring tasks in order to develop the most efficient ways to perform them. Now, curriculum theorists such as Franklin Bobbitt (2004) were extending these ideas into education. In terms of PE, drills and fitness regimens derived from military training and gymnastic systems were seen as a way to promote physical strength and to encourage obedience in elementary students (Butler, 2006; Singleton, 2010). Secondary schools were the preserve of the wealthy and growing middle classes, and in the UK and North America, they had a strong focus on games, developed with physical and social goals as a means for preparation for life as managers in white-collar industry. Put in simple terms, public elementary schools promoted the health and discipline of the masses, while games in private secondary schools promoted the characteristics of loyalty, perseverance, and leadership that might prepare the elite for leadership roles in the British Empire and other colonial cultures (Whitehead, 2013).

In a policy statement made to the *Calgary Herald*, University of Calgary, Dean of Education Dr. Sumara (2010) argued that contemporary education must keep pace with social change, as our economic realities have shifted from a “factory” paradigm to a more cooperative means of production. “The factory model made sense at one time,” he suggests; however, “the world is no longer organized around assemblages of solitary workers responsible for single repetitive tasks. The prevailing model is one of diversified teams engaged in shared projects.” He argues that in order for the school curriculum to stay relevant, contemporary educators must pay attention to three core themes: “engaged learners, ethical citizenship, and entrepreneurial spirit.”

It is my contention here that PE is well placed to meet Sumara’s challenge, if it can reframe the project of PE as education *through* the physical, rather than education *of* the physical, and move beyond teaching to the rigid calendar of professional sports. Where

better to practise “team engagement in a shared project” than in an actual team of players where the goals and rules are openly negotiated? In the classroom, group projects are notoriously difficult to manage and assess in terms of who has contributed what and how. On the playing field or in the gymnasium, contributions, failures, and successes are, more often than not, strikingly transparent. In the unpredictable and mobile environment of game play, students have little choice but to think for themselves, make decisions, negotiate, strategize, and engage in critical discourse (Capel, 2007). The skills required for team play—the shared project referenced by Sumara—are, as he has pointed out, the necessary precursors to ethical citizenship. It is to this topic, and my research, that I turn next.

Inventing Games and Situated Ethics

Over the past three years, I have been researching the potential of IG, as a curriculum structure in games education within which students might develop ethical knowledge and understanding.

Inventing Games

Children have always invented their own games spontaneously in the park, the back yard, or in the playground during recess. In IG (Almond, 1986; Castle, 1990; Ellis, 1983b, 1986), the TGfU approach is applied to this kind of collaborative game invention. IG thus exists at the far constructivist edge of the dichotomy presented above—the local park rather than the factory. First, learners co-create their own games, based upon the four games categories outlined in TGfU (target, net, striking, and invasion), then they discuss how to adapt and refine them, using Dewey’s (1916) feedback loop of invention, observation, reflection, and action. The teacher encourages students to make their games “more inclusive and enjoyable for all participants” (Rovegno & Bandhauer, 1994, p. 61) by developing and modifying their rules and structures. Before they invent their games or begin to discuss how they might be improved, students are reminded of the importance of listening, respect, responsibility, contribution, and consideration, and they are required to “invent” a democratic process for making decisions. In this way, the curriculum promotes engagement in critical discourse and ethical action, as well as in active and reflective game play.

The literature has shown that learning through the process of game construction increases students' game knowledge and ownership. Students almost always report that their invented games are more fun, more inclusive, and more "playable" than traditional games (Butler, 2008). Almond (1986) and Rovegno and Bandhauer (1994) have demonstrated that in IG, students create exciting game play that emphasizes improvisation, imagination, and interdependence. They become part of a dynamic, inclusive, and nurturing community (Curtner-Smith, 1996) that fosters and shapes learning. They question the purpose of rules, regulations, strategies, and tactics, and, in this way, they become critical and engaged. Through structured, interactive events, they perceive and adjust their beliefs through empathizing with others (Davis, Sumara, & Luce-Kapler, 2008; Johnson, 2004).

Situated Ethics

In the research referenced in this paper, I have drawn from contemporary studies of ethics (Varela, 1999), consciousness (Donald, 2001), collective action (Davis et al., 2008), and social critical theory (Hellison, 2003; Tinning, 2002; Rovegno & Kirk, 1995; Bain, 1990) as I seek to investigate how "ethical know-how" (to borrow from Varela) can emerge in authentic situations in a participatory, adaptive learning culture such as IG. Building on Goodlad, Mantle-Bromley, & Goodlad (2004, p. 36), I have identified "skills and dispositions" that are commonly referred to in the rhetoric around democratic citizenship and that are also applicable to "successful" game play (games that flow, and that are fair and engaging). These skills and dispositions include decision-making (which translates into individual and group decisions during game construction and game play); communal fairness (construction of rules that serve all members of the group in terms of physical and cognitive challenge); personal and social responsibility (weighing individual interests and the greater good of the group); justice (exploring power and equality issues); negotiation (resolving differences); and free inquiry (the right to have and express an opinion and to agree or disagree with the opinions of others). Though this list is not definitive (exhaustive debate of the nature of abstractions such as "character" and "virtue" have engaged philosophers for millennia), it provided a starting point for the study.

Method

The research project extended a pilot study conducted in 2007–2008 (funded by a SSHRC/Hampton HSS Large Grant), in which I compared two groups playing IG in terms of the complexity of the game structures they invented, the ways in which they related to each other during the process of invention, the constraints they imposed on themselves, and their analysis of the rules they had created. This pilot provided the foundation for the three-year program of research (completed in 2013) and conducted with Dr. T. Hopper. This moved my investigation into the wider consideration of the possibility of transfer between situated ethics and team play in co-constructed games.

Our specific research questions were as follows:

1. What are the processes, dynamics, and insights of students and teachers engaged in Inventing Games (IG), paying particular attention to the interactive structures that arise?
2. Can we determine whether awareness and performance of situated ethics transfer to ethical decision-making during game play of invented and institutionalized games?

Six experienced teachers from Victoria and Vancouver (serving Grade 4 and Grade 8 students) worked with purposeful samples drawn from regular classes of students (students were diverse in terms of player ability, and represented girls and boys equally). Teachers and students were observed and filmed as they participated in units using both an IG protocol for one unit and a linked institutionalized game unit (of the same category of games) using a TGfU approach. The teachers met regularly with us to discuss their work, and we provided them with extensive information, resources, and coaching about IG and situated ethics through eight one-day workshops. We developed a strong community of practice, and the Teaching Perspectives Inventory (Pratt and Associates, 1998) they completed every six months tracked significant changes in their teaching approaches. These are considered elsewhere (Butler, 2012). Ethnographic observations of in-class games, and individual and focus group interviews with selected teachers and students were also recorded by the research team. These multiple data sources were entered into NVivo 9.0 and are being analyzed at the time of writing. This article reports on preliminary findings.

Findings

Situated Ethics

As students invented their games, social justice issues became an important focus, for both teachers and students. One of the teachers in the study framed it this way:

I'm really working on our understanding through aporias and that's when you are really working through important and difficult stuff! I've moved so far from direct and tell to open and receptive that it's allowing students to really engage in decision-making processes. I'm really much more interested in engaging students in deep conversations during lessons than ever before and I think the students are liking it. They feel really listened to. (Erica, secondary, Year 2, 2012)

Moments of disruption are caused by disagreement and places of “stuckness” as well as experiences of sheer joy or delight (Kretchmar 2005). When the game flows, the player can have a moment of delighted gestalt, as learning falls into place, seemingly without effort. However, when the game breaks down and seemingly irreconcilable moments of conflict or *aporia* (difficulty) emerge, there are still important possibilities for teaching and learning. As the teacher above indicates, we have found that these have contributed to a greater understanding of how democracy works and how the absence of social justice may cause it to flounder. The following examples may best serve to illustrate this point.

During a sixth grade IG lesson in the pilot study, raised voices made the teacher aware that a group of girls had become quite angry with the boys in their group. Here is the exchange as recorded in the transcript:

Jaelyn: “This isn’t fair! Who put you in charge?”

Josh: (bounces the ball impatiently) “Let’s just get on and play. We’re wasting time!”

When the teacher went to find out what had happened, it turned out that the boys had ordered the girls into defensive roles, reserving the offensive positions for themselves. A teacher embracing the more traditional discipline mastery approach might have been tempted to move the game along quickly, perhaps by reassigning positions. In this instance, the teacher asked the group some pertinent questions: How were the decisions

about who played where made? Who took most power in making these decisions? Who benefitted? Who did not? What other ways of placing players might be considered? Why is it important to include everyone in decision-making, and take some time to hear all views? What other situations mirror this one? As they discussed these questions, the boys in the group began to see that they did not have the right to delegate roles so arbitrarily.

In another instance, six eighth grade boys were choosing teams of three. According to one of the group's members, Jamie (all names are pseudonyms), the group of six included "two kids who can't speak English and who don't get involved, and then two athletic kids" as well as himself (self-described as unathletic), and a tall powerful Asian player called Taizo. Without consulting the other four, the two "athletic kids" (Caucasian students Mike and Barry) took charge of organizing the teams. As Jamie put it later, "some people who aren't as popular as others got kind of disregarded by the people who were trying to lead . . . and after that I had no say." Mike and Barry invited Taizo onto their team, which would clearly crush that comprised of the three less athletic students. When Jamie suggested that the teams should be mixed so things became "more even," Mike and Barry responded by dropping Taizo from their team and offering to play two on four. Jamie didn't feel this was a fair solution, and the process was stalled, until the teacher helped the group unpack what had happened and make a more reasoned and equitable team selection.

In both of these examples, what might have been seen as awkward moments to be navigated by prompt teacher intervention became teachable moments, as the members of the group were invited to consider and discuss, albeit in simple terms, the intersections of such things as power, race, gender, privilege, and perceived physical ability. As Jamie pointed out after workshop 5 (November 4, 2011) in his debrief of the lesson described, this suggests that PE might offer "a place to have more than just athletic ability . . . for example showing how you make smart decisions and can give good ideas."

Other discussions that have emerged in the research have included the following:

1. What happens when students use each other as "targets," say in dodgeball?
2. What happens when smaller students, or students from minorities, or less skilled players, are not selected for teams, or not equally included in game play?
3. What happens when someone doesn't participate in decisions and then complains about them?

4. What is cheating, exactly? Is it ever okay to keep quiet about an action that is unfair?
5. Why do we need referees? How should they be treated?
6. How can a group make fair decisions?
7. Does everyone have the same rights, including the right to participate and be heard?

Pedagogical Steps

As the teachers have moved into these new and usually unfamiliar discussions of situated ethics, they have been challenged to invent new pedagogical structures and strategies. It is worth reminding the reader here that PE teachers deal with many moving bodies in various states of coordination and in limited space. Issues of safety, both physical and emotional, may lead to a strong, and often necessary, focus on control:

From my first two years in the study I used to like to have control and now I have changed. I was still doing TGfU during the first two years but it was very much controlled by me. The students weren't discovering things on their own like they are now. I now teach for creativity. I thought being creative was putting the ball between your legs when you dribble but now it is so much more. I also include democratic decision-making and tie it to social justice. Other than social studies I never thought you could include this in PE. (Ken, secondary, Year 3, June 2013)

Most of the teachers in the study have come to see that the IG classroom exists on the edge of instability, neither dissolving into chaos nor settling into inertia. Rather, it evolves by adapting as it moves along. Both students and teachers have constantly considered and reconsidered structures and constraints that might both maintain sufficient order and open up new possibilities. As our community of practice discussed the girls' outburst in the example above, for instance, we co-developed the following pedagogical steps that might help teachers and students navigate such situations:

1. **Assess the temperature of the group.**
 - Are its members able to debrief and negotiate in their emotional state?
 - Might a cooling off period be necessary?
 - Might they need to sit in silence for a few minutes?

2. Define the moment of breakdown in communication.

In the instance under discussion, it might be

(a) when the boys imposed a ruling that did not involve the girls in a fair process, and

(b) when the group decided that offence was more desirable than defence.

3. Identify what democratic principle was violated and remind the group that it had initially been agreed upon.

Why was it set aside? In this instance, the group had settled upon a democratic decision-making process. The reasons why the boys set it aside were complex and ultimately reflected the socialization and enculturation of both boys and girls.

4. Identify democratic attribute or value that might make the Inventing Games process work more smoothly.

In this instance, possible responses include increased understanding of respect, empowerment, and fairness. Democracy does not work when there are power inequities amongst voters.

5. Decide how this situation might be resolved.

In this instance, a solution might be to re-establish and reinforce the processes of negotiating group decisions and then apply these to decisions about player roles.

6. Consider policies or practices that might help prevent this situation.

How might the group become aware of player grievances and how might they address them?

7. Invite students to write about their experiences.

In order to unpack their experiences and underscore what they have learned, invite students to write about their experiences. In particular, ask them to identify the principles, concepts, and structures they have encountered.

8. Consider pedagogical implications.

In this instance, the teacher might resolve to better educate the class about offensive and defensive roles. At the very least, the argument provides an excellent starting point for further work around mutually supportive teamwork.

Enabling Constraints

Hopefully, it is obvious to the reader by now that the teacher in IG does not offer students an unbounded, free-for-all learning experience. Rather, he or she is constantly on the lookout for teachable moments, able to design learning experiences that produce them, and ready to make appropriate interventions as they occur. One of my primary research goals was to consider the pedagogical structures that TGfU teachers constantly manipulate in order to provide the best opportunities for understanding. Representation and modification are core pedagogical principles in TGfU, as teachers vary rules, regulations, and equipment, often on the fly, to draw attention to skills and concepts. In TGfU, as Chow et al. (2007) point out, constraints are carefully chosen and manipulated by the teacher in order to promote learning by exaggerating (and thus drawing attention to) certain concepts in game play. For instance, when the teacher makes the court in a net game longer and thinner, the attention of learners becomes focused on the need to invent suitable offensive tactics, such as moving the player to the back of the court with a lob or to the front with a drop shot. This crucial difference can be illustrated with an example. In a TGfU lesson, students might be told that the proscriptive intention of the game is to keep the object (for instance a ball or shuttlecock) away from their opponents. They are then left to figure out various ways to fulfill that intention. In more traditional PE classes, teachers might break down the skills required to execute a lob shot and teach those skills in sequential drills separately from the game context.

Teacher-Led Enabling Constraints in Inventing Games

In these research projects, teachers were encouraged to design and apply enabling constraints to both game design and game play in IG in order to harness the educational potential of games education in the ethical dimension. For instance, the community of practice meetings generated the following constraints to offer students in their classes before they began the process of inventing their games:

1. They could not decide upon rules without establishing a group protocol for making group decisions that is fair, equitable, and speedy.
2. No one could be excluded from discussion, although individuals were not required to contribute.

3. Rules could not be imposed by just one member of the group.
4. All rules could be refined or removed at a later time.

We hope that as the potential of Inventing Games for teaching situated ethics is further understood and explored, future research might build upon some of the pedagogical tools and structures we have developed for practitioners (see Butler, 2013).

Student-Led Enabling Constraints

From teacher-led constraints, I move to consideration of student-led constraints. Interestingly, our preliminary findings suggest that when students invent their own games, they have an almost uncanny knack of choosing constraints that are not only developmentally appropriate and suited to their current level of skill, but also serve to draw attention to their social, physical, and affective needs. Students who are younger, less experienced, or less coordinated created rules that afforded them the time and space they needed to make decisions, while students who were older, more experienced, or more coordinated created rules that privileged defenders a little more, and put pressure on offensive players. Again, I offer two illustrative examples.

One fourth-grade group inventing an invasion game decided to use the centreline as a boundary for offence players, thus effectively stopping traffic at the goalmouth. This was manageable since the playing area was relatively small (15 x 10 yards). This provided the defensive players with much more time to strategize and organize their defense. Since the members of the group were less skilled and confident, this constraint was highly appropriate and offered just the conditions they needed to consider strategies and try out their skills. In the same class, a more competitive and confident group used constraints to afford players more, and more rapidly executed, shots on goal. Because their game was faster and more challenging, it offered these students the chance to think quickly and almost instinctively.

At one point in our pilot study, a group of rather shy students invented a cooperative game that involved one player with the ball closing her eyes and spinning on the spot as she released the ball for her teammates to catch. The game worked well, initially, in that it was well within the comfort and skill level of the players, and above all, tremendous fun. The girls giggled, as they grew increasingly dizzy and uncoordinated.

The pedagogical trick of course, is that the teacher must work with the constraints of the students' games as he or she helps students expand and refine them using the following questions:

1. Does the game flow?
2. Is it challenging?
3. Is it safe for everyone?
4. Is it fair?
5. Is everyone involved?
6. Is it fun?

As students work through these questions, they consider changes and improvements to their game. Changes in regulations, changes in court dimensions, ball size or type, goal size, and the scoring system can make the game more accessible or challenging. Changes in rules usually influence the flow, fairness, and accessibility of games.

For example, in the spinning game described above, the teacher asked the students if their game flowed. While the game had entertained the girls for a short time, they had begun to tire of the stop–start nature of the game as they went to retrieve the ball time after time. They decided to make some changes. The first was to eliminate the spin, and simply throw the ball over the net as they called out the name of the intended receiver. They also introduced the possibility of a bounce before the catch was made. The game was still not highly challenging, but these girls, who might well be the most easily intimidated by the traditional PE curriculum and pedagogies, had worked together to invent a cooperative game that suited their level of confidence and ability, and then refined it, through understanding its challenges and limitations. Their experience undoubtedly made them more confident and gave them a sense of increased agency.

Conclusion

Doll has described (as cited in Pinar, 2004, p. 37) the curriculum as a “coursing, as in an electric current... that which courses through the inner person, that which electrifies or gives life to a person's energy source.” It would seem that when we can engage our students (through the physical) with the physical, mental, and emotional processes that “course” through them, they will demonstrate that curriculum, like consciousness, is

truly emergent. At this point, we hearken back to the analogy of the local park, where rather than engaging in teacher-directed activities, children enjoy creative play, which is not *unstructured*, but rather structured as it goes along, by the players and with the help of the teacher. TGfU involves students in constant on-the-spot decisions as they operate within the constraints provided and play in game and game-like situations. Rather than applying what they have learned in drills or have been told by their coach or teacher (as in the disciplinary mastery approach), they respond in a variety of ways as they inhabit a “complex” rather than a “complicated” situation (Davis et al., 2008). IG takes a small step further from TGfU, as it involves students in on-the-spot decisions as they play their games, but additionally, in decisions they make together as they invent and refine these games and identify the rules and restraints they wish to use to make their games fun, fair, challenging, and inclusive.

In the field of public art, Ellsworth (2005, p. 1) has asked what it might mean to “think of pedagogy not in relation to knowledge as a thing made but to knowledge in the making.” As she considers the pedagogies that are embodied in physical places of learning such as museums and art galleries, she considers the “means and conditions, the environments and events of knowledge in the making.” IG units also offer physical spaces in which students may feel and think their way into new learning. The teacher is, of course, complicit in this process, as the architect of the learning structure and as the “curator” of the experience. As Ellsworth points out, the Vietnam Veterans’ Memorial was constructed in a way that guides its visitor inexorably toward a moral centre. So the teacher/facilitator in the IG process seeks to move students closer to embodied understandings of social justice and democratic principles. In a physical learning environment, ethical situations are much more difficult for students to circumvent or ignore than, say, in a civics class. Those students who pay lip service to social justice in their written or oral communications may be the very ones who refuse to pass the ball to girls, or to less popular students, or who privilege the large, the strong, and the able in other ways. In the physical environment, it is impossible for students to evade the consequences of off-kilter ethics.

Davis and his colleagues (2008, p. 84) set play at the centre of the learning experience, pointing out that the antonym of play is not “work,” but “rigidity or motionlessness.” “Play” they remind us, “is *the possibility of movement*” (emphasis added) and Schiller (1910) defined play as the highest expression of human freedom. As Chow et al. (2007) suggest, from a more pragmatic and empirical perspective, there is rarely

one strategy to be usefully adopted in a given game situation, and play is a vital part of engaging the learner in creative and adaptive responses that are essential to becoming expert. The practice of situated ethics in IG opens up important opportunities for ecological teaching (that is, teaching that focuses on learning for sustainability at both individual and global levels). Players are engaged in creative learning that engages and re-engages them in games that evolve as they evolve, since an ecologically minded TGfU teacher becomes a teacher focused on capturing emergent learning, supporting it with “a cognizing moment, and fostering subsequent iterations of that learning back into a new game structure” (Butler, Storey, & Robson, 2012). The honest village man, Varela (1999) suggests, is he who adheres to the rules of his community, but the enlightened man takes advantage of those moments of rupture when rules break down and must be reinvented and renegotiated.

As our students invent and play their games, they imitate the larger Game of Life by making knowledge up as they go along. They question foundational knowledge as they consider the nature and purpose of rules; social constructs around race, class, and gender; and ethical behaviours. Of course, these conversations and negotiations take place within the broad, enduring context of an ethic of fairness. Without fairness and structures, the game would not be a game at all, but something different—a war, perhaps, or at least an invasion—that which Lasch (1984) has called the frontier psychology and the dream of unlimited expansion.

References

- Almond, L. (1986). Games making. In R. Thorpe, D. Bunker, & L. Almond (Eds.), *Rethinking Games Teaching* (pp. 67–70). Loughborough, UK: University of Technology.
- Bain, L. (1990). A critical analysis of the hidden curriculum in physical education. In D. Kirk and R. Tinning (Eds.), *Physical education, curriculum and culture: Critical issues in the contemporary crisis* (pp. 23–42). London, UK: Falmer Press.
- Bobbitt, F. (2004). Scientific method in curriculum-making. In D. J. Flinders & S. J. Thornton (Eds.), *The Curriculum Studies Reader* (pp. 9–16). New York, NY: Routledge.

- Butler, J. (2006). Curriculum constructions of ability: Enhancing learning through teaching games for understanding (TGfU) as a curriculum model. *Sport, Education and Society*, 11(3), 243–258.
- Butler, J. (2008, June). Learning decision-making and democracy through inventing games. Presented at CATE, PHETE, Canadian Society for the Study of Education, XXXVI Annual Conference, UBC, Vancouver, Canada.
- Butler, J. (2012, July 14). Conceptualizing Teaching Games for Understanding by Revisiting Foundations. Presented at keynote address International Conference (5th) of Teaching Games for Understanding, Loughborough University. UK.
- Butler, J. (2013). Stages for children inventing games. *Journal of Physical Education, Recreation and Dance*, 84(4), 48–53.
- Butler, J., Storey, B., and Robson, C. (2012). Emergent learning focused teachers (ELF's) and their ecological complexity worldview. *Sport, Education and Society*, DOI:10.1080/13573322.2012.680435.
- Capel, S. (2007). Moving beyond physical education subject knowledge to develop knowledgeable teachers of the subject. *Curriculum Journal*, 18(4), 493–507.
- Castle, K. (1990). Children's invented games. *Childhood Education*, 67(2), 82–85.
- Chow, J. Y., Davids, K., Button, C., Shuttleworth, R., Renshaw, I., & Araujo, D. (2007). The role of nonlinear pedagogy in physical education. *Review of Educational Research*, 77(3), 251–278.
- Curtner-Smith, M. (1996). Using games invention with elementary children. *Journal of Physical Education, Recreation and Dance*, 67(3), 33–37.
- Davis, B., Sumara D., & Luce-Kapler R. (2008). *Engaging minds: Changing teaching in complex times*. New York, NY: Routledge.
- Dewey, J. (1916). *Democracy and Education*. New York, NY: Macmillan.
- Donald, M. (2001). *A mind so rare: The evolution of human consciousness*. New York, NY: Norton.
- Ellis, M. (1983a). 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. (1983b). Decision-making: The key to success in games. *Runner*, XXIII (3), 24–28.

- Ellis, M. (1986). Making and shaping the game. In R. Thorpe, D. Bunker & L. Almond (Eds.), *Rethinking Games* (pp.61–65). Loughborough, UK: University of Technology.
- Ellsworth, E. (2005). *Place of learning: Media, architecture, pedagogy*. New York, NY: Routledge.
- Goodlad, J. I., Mantle-Bromley, C., & Goodlad, S. J. (2004). *Education for everyone*. San Francisco, CA: Jossey-Bass.
- Hellison, D. R. (2003). *Teaching responsibility through physical activity*. Champaign, IL: Human Kinetics.
- Jewett, A. E., Bain, L. L., & Ennis, C. D. (1995). *The curriculum process in physical education*. Madison, WI: Brown & Benchmark.
- Johnson, S. (2004). *Mind wide open: Your brain and the neuroscience of everyday life*. New York, NY: Scribner.
- Kirk, D. (1992). *Defining physical education: The social construction of a school subject in postwar Britain*. London, UK: Falmer Press.
- Kirk, D. (2013). What is the future for physical education in the twenty-first century? In S. Capel & M. Whitehead (Eds.), *Debates in physical education teaching* (pp. 220–231). New York, NY: Routledge.
- Kretchmar, S. (2005). Teaching games for understanding and the delights of human activity. In L. Griffin & J. Butler (Eds.) *Teaching games for understanding: Theory, research and practice*. Champaign, IL: Human Kinetics.
- Lasch, C. (1984). *The minimal self: Psychic survival in troubled times*. New York, NY: Norton.
- Lauder, A., & Piltz, W. (2013). *Play practice*. Champaign, IL: Human Kinetics.
- Light, R. (2008). Complex Learning Theory—Its epistemology and its assumptions about learning: Implication for physical education. *Journal of Teaching in Physical Education*, 27, 21–37.
- Mauldon, E., & Redfern, H. (1981). *Games Teaching*. London, UK: Macdonald and Evans.
- Mitchell, S., Oslin, J., & Griffin, L. (2013). *Teaching sport concepts and skills: A tactical games approach*. Champaign, IL: Human Kinetics.

- Phillips, M. G., & Roper, A. P. (2006). History of physical education. In D. Kirk, D. Macdonald & M. O'Sullivan (Eds.), *The Handbook of physical education* (pp. 123–140). London, UK: Sage.
- Pinar, W. F. (2004). *What is curriculum theory?* Mahwah, NJ: Erlbaum.
- Pratt, D. & Associates (1998). *Five perspectives on teaching in adult and higher education*. Malabar, FL: Krieger.
- Rossi, T., Fry, J., McNeill, M., & Tan, C. W. K. (2007). The games concept approach (GCA) as a mandated practice: Views of Singaporean teachers. *Sport Education and Society* 12(1), 93–111.
- Rovegno, L., & Bandhauer, D. (1994). Child designed games: Experienced teachers' concerns. *The Journal of Physical Education, Recreation and Dance*, 65(6), 60–64.
- Rovegno, I., & Kirk, D. (1995). Articulations and silences in socially critical work on physical education: Toward a broader agenda. *Quest*, 47, 447–474.
- Schiller, F. (1910). Letters upon the aesthetic education of man. In C. Eliot (Ed), *The Harvard Classics: Literary and philosophical essays*. New York, NY: Collier.
- Singleton, E. (2010). More than “just a game”: History, pedagogy, and games in physical education. *Physical & Health Education Journal*, 76(2), 22–27.
- Sumara, D. (2010, June 17th). Changing education for a changing world. *Calgary Herald*. Retrieved from: www2.canada.com/calgaryherald/news/theeditorialpage
- Taylor, F. W. (1911). *Principles of Scientific Management*. New York, NY: W. W. Norton.
- Thorpe, R., Bunker, D., & Almond, L. (1986). *Rethinking games teaching*. Loughborough, UK: University of Technology.
- Tinning, R. (2002). Toward a “Modest Pedagogy”: Reflections on the problematics of critical pedagogy. *Quest*, 54(3), 224–240.
- Varela, F. J. (1999). *Ethical know-how: Action, wisdom, and cognition*. Stanford, CA: Stanford University Press.
- Wade, A. (1967). *The F.A. guide to training and coaching*. London, UK: Heinemann.
- Whitehead, M. (2013). What is the education in physical education? In S. Capel & M. Whitehead (Eds), *Debates in physical education teaching* (pp. 22–36). New York, NY: Routledge.