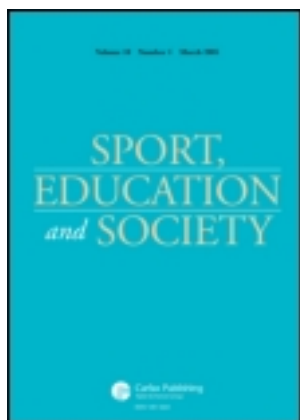




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Curriculum constructions of ability: enhancing learning through Teaching Games for Understanding (TGfU) as a curriculum model

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This article examines the curricular constructions that influence our perceptions of learner 'ability' within games education. Games education has both inherent and intrinsic value for learners, and within this context, teachers make important choices about what they believe will be of most value and interest for students. This in turn impacts the way that the curriculum is constructed and developed. Extrinsic cultural and social values have also had an impact upon the discipline. These values have been usefully summarized by Jewett as five value orientations: (1) disciplinary mastery, (2) self-actualization, (3) social reconstruction, (4) learning process and (5) ecological integration. Identification of the philosophical principles which underpin the curriculum allows the reflective part of the praxis to take place. These five value orientations provide critical reference points for my exploration of the different ways in which two curricula constructions frame ability. Teaching Games for Understanding (TGfU) and the more familiar model of Technique-Based or Direct Instruction are considered, not to further the methodology debate, but to illustrate how each frames ability differently. This will be achieved by examining the context and culture within which each has developed. Finally, a closer examination will be made of the TGfU curriculum model in terms of the ways in which it defines learner ability. It is suggested that, TGfU offers a more inclusive way to think about ability in PE by employing a range of value orientations. As teachers encourage learners to invent their own games, they help them to develop respect for equal justice and for free and open inquiry (social reconstruction). In this way, learners come to appreciate and understand their responsibility to protect individual and collective rights and freedoms. When it comes to teaching democracy, it is clearly important to pay close attention to the entire context in which learning takes place, since by definition, the notion of democracy applies to individuals as they operate within community. The TGfU approach lends itself to the teaching of democracy in schools, since it empowers both teacher and learner and invites them to question the *status quo* (ecological integration). In this way, players focus on creating play as a shared experience, not just on being winners.

Keywords: *Constructions of ability; Constructivism; Curriculum model; Democracy; Inventing games; Learner centered teaching; Physical education; Teaching Games for Understanding; Values orientation*

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Introduction

It's seventh grade PE. Four groups of learners play games that they have invented. They chase down the ball and call out enthusiastic comments—'Get it Josh! Send it over here!'

At the far end of the gymnasium, girls in the fourth group face off against the boys. 'It's not fair!' they yell. 'Who put you in charge?' Josh bounces the ball impatiently. 'Let's just get on and play,' he says. 'We're wasting time!'

As the PE teacher strides across the gym to address the conflict, she carries not only her whistle, but her opinion about the purpose of the lesson. This will determine her assessment of the situation—whether she sees it as a teacher's nightmare or a teaching moment. She has a number of options. One would be to reprimand her charges and order them back on task. (For goodness sake—PE is about being active!) Instead, she asks what's wrong. The outraged girls inform her that the boys have given the girls defensive roles, preserving the offensive positions for themselves. Once again, the teacher could reprimand the boys for their selfishness before assigning them positions and setting them in motion. Instead, she encourages them to discuss how they might negotiate decisions to reach fair outcomes. In other words, she helps them develop a democratic process.

Were the quarrelsome learners on task? If she wants to construct a curriculum that will develop her learners' ability to find meaning and to become thoughtful citizens, then yes. If she wishes to develop a curriculum that will encourage learners to master skills and perform techniques efficiently, then the disagreement is indeed a waste of time.

The way that physical education teachers make these decisions—from planning the curriculum to assessing learners' success in accessing it—depends upon the curriculum constructs they carry, some conscious and some so subtle and engrained that they are as little aware of them as their own breathing.

In this article I will firstly examine the curricular constructions that influence our perceptions of learner 'ability' within games education. Secondly, I will identify how games education has both inherent and intrinsic value for learners and how the teacher's intrinsic values of games form philosophical choices about curriculum constructs. Thirdly, I will show how these values have been usefully summarized by Jewett *et al.* (1995) as the five value orientations of (1) disciplinary mastery, (2) self-actualization, (3) social reconstruction, (4) learning process and (5) ecological integration. Fourthly, I will examine the two value orientations of disciplinary master and self-actualization inherent in the curriculum models of Direct Instruction and TGfU; we can trace the culture and context within which each has developed and see how it has led them to adopt widely different approaches to learner ability. Finally, I will discuss the TGfU curriculum model (using Inventing Games) in more detail, with specific emphasis upon the ways in which it defines learner ability. The TGfU model used here is the original 6-stage model devised by Bunker and Thorpe (1982).

Basic beliefs about curriculum

In this article, I define curriculum as praxis, and consider the elements of content, instruction and social context to be interactive elements of curriculum (Kirk, 1988). Teachers continually make decisions about the content to be taught and the instructional process to be used which best meet their learners needs. Decisions around curricular constructs such as content, planning, assessment and learning requires philosophical choices. Decisions may be based upon questions such as 'What should learners know? Why should they know this? Once specific content has been identified, questions around planning may include: What learning outcomes can be expected for a group of learners with varying degrees of experience and different learning styles? What information, and how much, do learners need at a given time? What should learners practice and when should they practice it? Teachers must ask a final question when it comes to planning the PE curriculum: What methodology will be most effective in achieving desired learning outcomes? Interestingly, the most productive answers are often given when teachers are introduced to new instructional models. Exposure to a new model can encourage the examination of current practices in the true sense of praxis: bringing about change to the curriculum. As teachers assess the curriculum's effectiveness, they ask questions: How do we measure our effectiveness as teachers? How do we measure student learning? What environment is conducive to learning? How do we know that learning has taken place?

Although it is tempting to assume that learner ability in PE can be objectively defined, this paper draws attention to the values-based curriculum constructs that underpin views on and decisions about ability(ies). For instance, a teacher-centered curriculum based on mastery of technique, knowledge of rules and game participation will define learner ability differently from a learner-centered curriculum in which learners determine what is processed and how it is processed and learned (Doyle, 1978).

Values of games education

Intrinsic and inherent values

Let us turn then, to an examination of values in games education, firstly the intrinsic and inherent value of games education, then secondly extrinsic and subjective values that influence the discipline.

As educators, we consider certain aspects of games education, such as the potential to teach mastery or decision making, to be more valuable than others, say the opportunities it provides for stepping on insects, or daydreaming. We define intrinsic value in terms of the properties we have decided will bring about the best quality of experience for our learners. Interest in these certain properties is a critical condition that must be met for anything to have value. As Taylor (1961) suggests, games education has the 'capacity to produce in us when we respond to it ... a quality of experience which has intrinsic value' (p. 26).

Inherent value is defined as the objective property of the game itself, something that is part of its essential nature. For example, we might enjoy a particular tennis game because we played well or were matched against a close opponent, but we also enjoy tennis because of certain inherent qualities, qualities that exist whenever it is played (e.g. being able to strike the ball with a racquet with varying degrees of force). We understand the inherent value of games intuitively and hope that our learners will enjoy experiences that have intrinsic value for each and every learner, provided by this underlying inherent value. These experiences are shaped by the way that they are presented. If the lesson teaches only techniques (i.e. mastery) the intrinsic experiences that our learners enjoy will be limited to an understanding of these technical fundamentals. As Cote and Hay (2002) suggest, it may be equally important for coaches to stress affective values, for instance by being kind and cheerful with younger students in the 'sampling' years to help develop 'basic identities, motivations, values and beliefs about sport and physical activity' (p. 488). Also, if the game experience is presented in a game-like situation and provides the qualities of a contest that offers equal opportunity (in the way that a TGfU class can), then we get closer to the inherent value of games—the experience of playing for the 'game's sake'. John Wooden's view of an optimal practice environment supports this idea: 'in every facet of basketball, we work on pressure. The opponent provides that during the game. I tried to provide that in practice with drills that recreated game conditions' (Wooden, 1988, p. 113).

Objective and subjective values

Whether or not teachers choose 'deliberate practice' or 'deliberate play' will be determined by whether teachers believe that learners are motivated by a process-experimentation perspective, such as having fun (while practicing a specific skill or concept) at one end of the continuum, or are motivated by a goal directed perspective, such as learning to improve skills at the other end (Cote & Hay, 2002). These values derive from the influence of objective experience (the conditions and context of the game or game form), and from the influence of subjective experience (brought to the process by the learner's engagement) (Fraleigh, 1984). For instance, when considering what games to offer, objective conditions such as the availability of appropriate facilities, available time, geographical location and background of learners should be important considerations. Other objective conditions stem from external objective forces, such as national or regional curricula that institutionalize attention to certain outcomes, such as cardiovascular fitness. These values then become part of the rationale for including games education in a PE curriculum, and determine choices, such as whether to offer baseball, golf, basketball or soccer.

The subjective values that teachers bring to the experience of games education and the way in which these help define the ability of learners, are shaped by the understanding of the teacher with regard to 'what is the nature of a good life and a

good society' (Tyler, 1949, p. 34). For instance, the teacher may deem that a games education experience is more effective and efficient if learners use drills in 'deliberate practice' (Cote & Hay, 2002) to improve, for example the chest pass in basketball, even if such drills are less enjoyable than those created in fun, game-like situations. Teachers may also value lifelong activity; health-related fitness, understanding of structure and rules, working in teams, acceptance of authority and exposure to social justice issues such as fairness and equity. These beliefs about games education can be organized more coherently by sorting them into several different value orientations in PE curriculum design and development.

Five value orientations

Jewett, Bain and Ennis (1995) defined five value orientations: disciplinary mastery, self-actualization, social reconstruction, learning process and ecological integration. Each provides a perspective on 'curriculum' which is essentially an inter-related set of beliefs, intentions and actions linked to knowledge, learning and the role of a teacher. Each also very clearly frames 'ability' and 'the able student' in physical education in different ways.

Disciplinary Mastery. Value is placed upon mastery of subject matter. The curriculum reflects this by emphasizing the most 'correct' and efficient way to carry out skills. The ideal learner is compliant, responsive to the teacher and memorizes information accurately. The school is regarded as an institution that transmits cultural heritage from one generation to the next. Evaluation is based upon a narrow definition of effective performance.

Self actualization. This type of curriculum values perceiving, behaving and becoming. There is usually an emphasis on thinking, reflecting on performance, setting goals and making personal decisions. The major importance is placed upon the development of process skills that will nurture individual development such as thinking, reflection, self-evaluation and goal setting. The school values individual achievement. Evaluation is based upon self-understanding and individual growth, rather than comparison with others.

Social reconstruction. The curriculum values efforts to build bridges between what is and what might be. Inequities are made clear, and strategies are offered to deal with them. The ideal learner considers him or herself to be less important than the larger society to which s/he belongs. Learners are encouraged to think of themselves as agents of change. The school values social reform with the goal centered on cultural change. The school is viewed as a mechanism to create a better society.

Learning process. The curriculum values how learners learn as much as it values what they learn. It is considered important that learners learn the process and problem-solving skills they will need to cope with the vast knowledge explosion and

to stay abreast of technology. The ideal learner in this context is self-starting and adaptable. S/he is able to apply skills and adapt to and process new situations. The school culture emphasizes adjustment to progress, and high levels of conceptual ability. Evaluation occurs within the process of learning.

Ecological integration. The curriculum values the search for meaning and encourages learners to ask and examine critical questions. The ideal learner sees him or herself as an integral component of an ecosphere, who responds to her/his environment and thus determines the nature of his/her universe. The school is regarded as a context within which a holistic person may be integrated. It looks to the future. Evaluation techniques are selected to ensure that learners develop a holistic perspective.

Impact of two different value orientations on learner ability

Even when value orientations are not consciously considered they nevertheless influence what is being adopted, what is adapted and what is rejected when pre-service teachers engage in their teacher education programs (Powell, 1992), or qualified teachers engage with curriculum requirements, syllabus documents or support materials. In this regard, the purpose of the following discussion is to draw out the sensitive and subtle ways in which two different value orientations: disciplinary mastery (inherent in the Direct Instruction model) and the self-actualization (inherent in the Teaching Games for Understanding model) impact the curriculum and teachers' perception of learner ability.

The disciplinary mastery (i.e. 'transmission') value orientation is considered the 'norm' in PE (Jarvis-Selinger, Collins & Pratt, in press), while the direct instruction model is the prevailing model in most schools and Physical Education Teacher Education (PETE) programs (Metzler, 2000). The direct instruction model is grounded in behaviorist learning theory, according to which the teacher's task is to provide stimuli (i.e. conditions) and reinforcements to get learners to respond appropriately (Butler & McCahan, 2005). 'When the participation task is clear and fairly well routinized, as in direct instruction, then pupils can concentrate on learning content rather than on trying to draw inferences about shifting requirements for participation' (Morine-Dersheimer, 1985, p. 179).

In contrast, the TGfU model is based upon constructivist learning theory that suggests that learners will make sense of their world by synthesizing new experiences with what they have previously come to understand. Teachers using this approach believe that through the medium of the physical, learners can understand, synthesize and apply information to new situations (Butler, 1997). These contrasting value orientations can be better understood if we consider the culture and context of physical education and the development of philosophical and historical perspectives within these.

Philosophical and historical Perspectives

Recently, Jarvis-Selinger, Collins and Pratt (in press), found that in a comparison of eight disciplinary majors (mathematics/sciences, life sciences, social studies, language arts, home and technical sciences, expressive arts, business and physical education), pre-service physical education teachers scored equal highest (along with math/science) on the 'transmission' perspective (similar to Jewett *et al.*'s disciplinary mastery) when eight different disciplinary majors ($N=356$) were compared. These students were more concerned with transmitting knowledge than with facilitating communicative knowledge. However, in the same study, pre-service physical educators scored higher on the 'nurturing' perspective than those preparing to teach in sciences, mathematics or the life sciences, emphasizing a concern for individual growth. As this study shows, no one is usually categorized by one teaching perspective. However, our discipline's leaning towards 'disciplinary mastery' values is of philosophical and historical significance. The dominance of this value orientation is explained by a brief examination of the culture and context from the nineteenth century onwards.

Culture. During the nineteenth century industrial revolution, a factory culture emerged (Butler, 1997). As Hal Lawson (1998) describes we are:

... beneficiaries, products and functionaries of an industrial world—the world of machine, the factory, the assembly line and large scale bureaucratic organizations ... All of us are steeped in mechanical, market-oriented professionalism ... Grounded in industrial age thinking and practices, which are oriented stability, certainty, predictability, regulation and control.

Simply put, this culture prioritized efficiency, as nations strove to produce the maximum possible number of 'widgets' at the most efficient rate. Also at this time, developed countries began to demand fit populations, which could compete with other nations not only on the battlefield, but also on the production line. As physical education for the masses adopted effective drills and fitness regimens through various gymnastics systems (Metzler, 2000; Siedentop, 2004), the concept of dualism, in which the mind and body are seen as distinct entities, took hold. The influences of the 'factory' (mechanical, market-oriented professionalism) culture can be seen in games education in a search for efficient ways to teach techniques. The curriculum was considered effective if it possessed features important to military success. Furthermore, learners were considered able if they were perceived as fit, compliant, motivated to work efficiently and able to master games. The underlying values at work in this culture were consistent with the orientation of 'disciplinary mastery' as described by Jewett *et al.* They were, however, to meet with a challenge as '... gymnastics-based curricula gave way to programs that held a broader vision for school physical education within the emerging developmental philosophies' (Metzler, 2000, p. 8).

A notably different culture, the so called 'Village Green' culture, provides the perspective for TGfU. Lawson describes this counter culture as 'social trustee civic

professionalism' (1997) which focuses on 'interdependence as the centerpiece of the new global age' (p. 3). Just as all ages, classes and abilities play on the village green, so in this approach, inclusiveness is key. Instead of a dualistic world vision, the importance of connection and integration are stressed. Technological competence is seen as important, but only part of the solution to the world's problems. The other part of the equation lies in the ethical-moral arena.

The shift towards individual development in school curricula emphasized children learning much the same way as they did in natural play, through self-discovery, exploration, observation and interaction. This approach had its roots in progressive education and based its philosophy on the work of Dewey (1916), Laban (1963) Brunner (1977), Margaret Ellis (1986), Rousseau (Knippenberg, 1989) and Gutek (2004), who all outlined the benefits and means of 'enabling' every child to participate, regardless of skill level, by modifying equipment, playing areas, numbers of players and the rules of the game.

Progressive educators might well see themselves reflected in the value orientation of self-actualization. Though this has not played out entirely in TGfU, there has been movement in this direction. This will be discussed further in the latter half of this article.

Context. Despite the emergence of a fledgling 'Village Green' culture with its developmental philosophies, the rapid growth of interscholastic and intercollegiate programs during the 1930s and 1940s resulted in the eventual domination of physical education programs by competitive sports, a focus upon better performers and the values orientation of disciplinary mastery. Gymnastics and exercises were replaced by sporting activities, and games education was often all that was offered in the PE program. This caused tension between those teachers who emphasized education of the whole child through the physical medium and those that still emphasized training of the physical body.

The curriculum reform movement in the 1950s gave further credence to disciplinary mastery, as federal money (in the USA) became available to improve performance in mathematics and the sciences and to raise the fitness levels of students. Other Western Nations began to include 'the 'learning process' value orientation in the search for more effective instructional strategies for achieving subject matter mastery' (Jewitt *et al.*, 1995, p. 30). This trend led to initiatives in the USA and the UK such as New Math and also to debates such as that surrounding Phonics versus Whole Language.

It was at this time that a group of researchers at Loughborough University in the UK conceived TGfU. Dissatisfied with the prevailing method of teaching games, they believed that there was insufficient evidence that it improved playing ability or understanding. Bunker and Thorpe (1982) built upon Ellis' work (1983) by designing a classification system that organized games into four categories according to their primary rules' intent. In addition, advocates of the approach quickly realized that it had the potential to encompass other value orientations. The structure of the TGfU curriculum more effectively embraced the dawning interest in motor

development in the 1960s and the development of the whole child. In TGfU, the 'adult' form of the game could be modified, leaving its tactical intricacies intact. By manipulating aspects of the game, such as the size of the playing area, the number of players and the equipment used, it became possible to create a form of the game that was more suitable for children.

The 1970s saw an emphasis in education on social justice issues and rights for minority groups. The dominant education values orientation here was social reconstruction, which affected the 'Direct Instruction' model in that teachers had to improve access to activity for the physically, socially and educationally disadvantaged. For instance, equal opportunity had to be provided for girls, persons with disabilities and for racial and ethnic minorities. Strong anti-competition movements were afoot in education, making the teacher-directed model, with its strong emphasis on winning and unthinking compliance, unpopular.

Curriculum content. Curriculum content is heavily influenced by value orientations and can indeed be viewed as the actualization of the ideas, beliefs and values of the teacher designing the curriculum. Put more simply, the educator's answer to the question 'why teach it?' determines 'what is taught'. Through examining curriculum content, therefore, it is possible to understand the impact of the PE curriculum upon perceptions of learners' ability. Discussion below presents the curriculum content of TGfU in four sections: conceptual frameworks, purpose, objectives and outcomes.

Conceptual frameworks (classification by intention) Rather than organizing its curriculum around the traditional calendar of seasonal games, and assuming that intra-task transfer will take place, TGfU uses a classification model, grouping together games with similar intents (and also concepts and skills, players' roles, playing area and offensive and defensive strategies). With these components in place, pedagogical techniques such as transfer, sampling and the spiral curriculum enhance the learners' understanding of game play. Intra-task transfers of skills within the game are developed, as is the transfer of concepts amongst the games within the category (Inter-task transfer). The classification system also allows teachers to sequence the teaching of games in a more developmentally appropriate order (Butler, 1997). Baker, Cote and Abernethy (2003) suggest that early specialization is not necessarily the key to athletic success and that 'participation in other activities may indeed be a functional element in the development of expert decision-making skill' (Baker *et al.*, 2003, p. 22). Practice in other sports may, they suggest, circumvent the need for hours of the sport-specific practice generally considered a prerequisite for expertise in team ball sports, by helping players to develop pattern recognition and decision-making skills.

Purpose (construction of meaning) TGfU's main purpose is to encourage learners to construct meaning from the situation in which they are placed. Their ability to make decisions as part of a skillful performance is paramount and decision-making is thus inherent in the conceptualisation of 'the able student'.

Objective (to discover what is unknown and apply what is known) In the Direct Instruction model, the teacher's objective is for the learner to learn information that the teacher is verbalizing and demonstrating, through a process that can be summed up as 'transmission'. 'Program goals will emphasize acquisition of particular motor performance skills and learning of related knowledge and understandings' (Jewitt *et al.*, 1995, p. 125). Implicit in this approach is the hope that the techniques training section of the lesson will transfer to the game part. The objective of the TGfU model, on the other hand, is to allow all learners the opportunity to experience games. Program goals here may include the development of problem-solving skills, the integration of experience and the opportunity for creative motor performance.

Outcomes (Thinking process/Decision making) In TGfU, the focus is upon why particular responses are appropriate and will prove effective in particular situations, and then upon how those responses (involving individuals and teams) can be effectively implemented. Learners are stimulated to think through situations and are encouraged to make decisions in small groups. Skills in negotiating, questioning, compromising and listening can thereby be developed and fairness, equality and empathy can be promoted. The ability to think strategically and in doing so, acknowledge individual abilities, is thus central to TGfU.

Democracy in action: Inventing Games and the TGfU model

In all regards, conceptual framework, purpose, objectives and desired outcomes, TGfU has evolved beyond the disciplinary mastery values orientation to include a broader range of values, including many of those in the categories of self-actualization, learning process and social reconstruction and ecological integration. Essentially, these are the very values that are necessary for what Lawson describes as the democratization of professional-citizen relationships:

Play forms and play communities are both democratic and educative. The play and related associations of people become educative communities i.e. planned and unplanned, formal and informal networks that facilitate the learning, healthy development and well-being of individuals and families. Play and play communities are sites for the co-production of social cultural capital. They are centerpieces of civil society. (Lawson, 1998, p. 38)

This next section will illustrate this point by examining *Inventing Games*—a games activity that lends itself to the TGfU model and perhaps best demonstrates its unique approach to learner ability.

Inventing Games

In *Inventing Games* (Almond, 1986; Ellis, 1986; Castle, 1990), learners are given the opportunity to create their own games based on the four games categories within the TGfU classification system. As a teacher, researcher and practicum supervisor, I

have found that as learners explore these games, the games evolve to become more equitable, more accessible and more fun. This activity is particularly useful with learners in grades four to eight (ages 9–13) and in teacher education workshops, since it helps both learners and adults understand game components. Players become more able to transfer concepts established within their own game to other games within that category. ‘After playing their games, learners discuss ways in which rules, dimensions of play, object, equipment and number of players can be developed or modified in order to make playing more inclusive and enjoyable for all participants’ (Rovegno & Bandhauer, 1994, p. 61). The role of the learners is to work together to create their own games, making decisions as part of that process. Learners resolve conflicts and learn from disagreements. Within their own game structure, learners progress through the games concepts involved at their own level of understanding and physical ability. Teachers help learners to work together democratically, to share ideas and to value and honor everyone’s contributions. In the initial part of the unit, individual and group responsibilities are discussed. The following guidelines are used to remind learners of the democratic process (Butler, 2005b).

- Contribute to your group discussion. You have the right to do so
- Listen to your peers until they have finished speaking
- Be respectful of your peers’ ideas, even if you don’t agree
- Be responsible for contributing to the decision-making process in the group
- Consider alternative ideas as the game unfolds
- Use your vote wisely

Learners are asked to create five rules that will help govern the game. As they play the game, they quickly begin to revise, add and remove rules, thus learning their value in a very concrete way. They tend to invent games that are suited to their rate of learning development.

After learners have tried out their games through play, they use the following questions to re-evaluate them (Butler, 2005b):

- Does the game flow?
- Is the game structured?
- Is it safe for everyone?
- Is the game fair for everyone?
- Is everyone involved?
- Is it fun?
- How do you feel about the game? About your involvement?

This process not only improves game play, but also allows learners to be engaged at multiple levels. For instance, emotional skills are developed through describing feelings. First hand understanding of game evolution and the necessity of rules is acquired. For many learners, there is a deep personal engagement in game play that they may not have experienced in traditional games. Because of the self-adaptive

nature of the games designed, learners who are timid, unconfident or less coordinated are able to design games that bring a high measure of success, and are 'safely' challenging (Butler, 1993).

At the end of two lessons, the groups are invited to demonstrate and explain their game to the rest of the group. The groups are then rotated so that they can try other games. Other roles, such as that of the official, can be introduced to help learners learn other aspects of the games and develop empathy for each of the roles. Content such as offense and defense strategies is introduced, and skills practices are integrated in the lesson in order to develop this content.

The values orientation of Inventing Games

Inventing Games has the potential to draw out several possibilities from the different value orientations, as shown in the table below. The table also shows the impact of these value orientations on the way in which learner ability is perceived.

The values orientation of 'ecological integration' most accurately defines the thinking behind the Inventing Games aspect of the games education curriculum. It is important to examine the learning theories behind this value orientation, and in particular, situated learning theory, which takes into account the physical, social and cultural dimensions of the context of learning, and examines the relationship between them (Lave & Wenger, 1991). Kirk and MacPhail, (2002) have modified and extended the TGfU model by drawing on situated learning theory.

Table 1. Curriculum constructs based on value orientations

Value orientation	Effects on TGfU Program goals	Impact on perception of ability
Disciplinary mastery	Classification organization of concepts and skills	Learners are able to compare and connect structure of own game to national games
Self actualization	Self-confidence in speaking in groups, self efficacy as effects of contribution is noticed and integration of experience, emotional, physical and cognitive competencies	Combines decision-making with self-efficacy. Willingness to listen, contribute to discussion, take initiative to change rules, structure and to put aside desire for group consensus
Social reconstruction	Appreciation of cultural diversity, commitment to equal opportunity	Respect for differences in ideas, appreciating effects of marginalization in majority voting
Learning process	Examine context of skill acquisition in context of game, original/creative game making, problem-solving skills and understanding about learning movement	Creative thought, creative play, problem solving ability, describe how skills fit into game
Ecological integration	Focus on democracy issues . . . communication, feelings, group process, personal meaning and group responsibility issue	Able to communicate, listen, articulate ideas, work out emotional levels and skills/strategies

Culture

Since the key theme of the Inventing Games curriculum is the democratic process, it is especially important to pay close attention to the culture in which learning takes place, since, by definition, the notion of democracy applies to individuals as they operate within community. Learning in school settings is social, and learning through engagement in team sport engages learners in ‘... a complex interplay of persons, activity, knowledge, and the social world’ (Grehaigue *et al.*, 2005, p. 157). This social world can be regarded as an ideal culture in which learners may learn about democracy. The team or group is a key component of this culture, and leads us to the notion of communities of practice, which Kirk and Macdonald (1998, p. 380) define thus: ‘we understand the notion of community of practice to refer to any collectivity or group who together contribute to shared or public practices in a particular sphere of life’. In Inventing Games, or indeed, in any game, team play provides a microcosm of the complex social relationships and interactions involved in working within the larger social community.

As learners learn from watching, listening and engaging with others, they engage in a ‘cognitive apprenticeship’ that prepares them for life in this larger community (Hansman, 2001, p. 45). The affective component of this learning is critical. Game play engages learners in core ‘Social and Emotional Learning’ (SEL) skills, such as self-awareness, social awareness, self-management, relationship skills and responsible decision making (Ragozzino *et al.*, 2003).

Context: chaos and order

By moving the focus of learning from ‘how’ to ‘why’, TGfU encourages learners to think. When learners begin to think for themselves, there are implications for teachers. The classroom, playing field or gymnasium becomes more participatory and democratic, as learners embrace both autonomy and responsibility. Instead of being a place in which the teacher orders and controls the learning experience, the learning environment becomes adaptive—a context that Lawson describes as ‘social trustee civic professionalism’. It exists on the edge of chaos, neither dissolving into disorder nor achieving static balance.

Inventing Games curriculum

Purpose (construction of meaning)

The wider purpose of Inventing Games is to develop learners’ skills and abilities to operate as democratic citizens. These skills include the ability to think critically, to make commitments and civic choices and to develop awareness of global problems (Soder *et al.*, 2001). A democratic citizen has sound character (honesty, integrity, respect and responsibility) and a social conscience (appreciates liberty and justice).

Desired outcomes for an Inventing Games Unit would include the following learner abilities to:

1. make choices and decisions in order to solve problems and regulate their own behavior
2. employ invention, creativity and imagination as they create their own game
3. make good rules to regulate behavior and make the game run smoothly
4. appreciate fairness and equality
5. consider others' points of view, to compromise and to negotiate conflict constructively
6. understand why rules are meaningful
7. make decisions including all members of small groups
8. become willing to question and trust their creativity
9. take a turn at all roles, to develop empathy and consideration for each position and official
10. construct their own cognitive maps as they create relationships amongst categories of games and from their own game to a game category
11. engage in free and open enquiry
12. understand their responsibility to protect individual and collective rights and freedoms (Castle, 1990; Butler, 2005a)

Conclusion

Games education has both inherent and intrinsic value for learners. Extrinsic cultural and social values have also had an impact upon the discipline. These values have been usefully summarized by Jewett *et al.* (1995) as the five value orientations of (1) disciplinary mastery, (2) self-actualization, (3), social reconstruction, (4) learning process and (5) ecological integration. When we examine the two value orientations of disciplinary master and self-actualization inherent in the two curriculum models of Direct Instruction and TGfU, we can trace the context and culture within which each has developed and see how it has led them to adopt widely different approaches to learner ability. In Direct Instruction, the conceptual framework is defined by the traditional games calendar. The objective is to define what is known, and outcomes are assessed in terms of skilled performance. In TGfU, classification is achieved through defining the intention of games. The objective is to discover what is unknown and apply what is known, and outcomes are assessed in terms of the ability to think creatively and make decisions.

Identifying the lens through which our physical educators view their work in terms of values orientations and teaching perspectives is critical if teachers are to be reflexive and to consider curriculum as praxis. Such understanding provides us with direction and justification for our actions. Some teachers are not aware of their perspective, because it is a lens 'they look through, rather than at, when teaching' (Jarvis-Selinger *et al.*, in press, p. 2). Debate about models and how each defines

student ability encourages teachers to question, examine and refine current practices and basic value orientations.

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