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CHAPTER 1

CRITICAL INQUIRY AND PROBLEM-SOLVING IN PHYSICAL EDUCATION

JAN WRIGHT

SCHOOLING FOR NEW TIMES

Whether they agree that we are now in a period of postmodernity, late modernity or high modernity (Kirk 1997), social commentators do agree that we live in times characterised by profound social and cultural changes which are recognisable globally but reach into the everyday lives of individual. The nature of these changes is in large part attributed to enormous advances in technology which have allowed for the rapid processing and transmission of information within and across countries and cultures. On one hand, the greater accessibility of information from a larger range of sources has exposed different points of view and thus provided more spaces for the challenging of taken-for-granted truths. At the same time, however, the ubiquitous presence of television and other forms of electronic media have provided a context in which populations can be persuaded to particular points of view, which include ways of understanding health and the values and meanings associated with physical activity and sport.

For individuals the information explosion, rapid changes in values across and between generations and social groups, and exposure to a wide range of values, produces a world in which knowledge is less certain and in which identities are no longer experienced as fixed and constant (Fernandez-Balboa 1997). These uncertainties extend to work, health, livelihoods, relationships and so. Living in such times has effects on how young people think about and do schooling. In Britain, Furlong and Cartmel (1997) have linked these changes to the concept of the risk society (Beck 1992), in which traditional and institutional forms of social and economic relationships have become fragmented and individuals bear the responsibility and cost of shaping their lives. Rather than follow a predetermined linear trajectory, young people are now called on to balance their multiple involvements in study, employment, relationships and leisure; they are active in constructing their own lives. Wyn and Dwyer (1999) and others (Du Bois-Reymond 1998) call this a 'choice biography', emphasising the extent to which

young people are making choices and following complex life patterns, rather than experiencing their pathways through youth as linear or preset.

The shifts in young people's life circumstances, and in their responses to these, which have been noted in the youth studies research, have significant implications for the provision of education programs and curricula that meet young people's needs. In the area of physical education, as in many other areas of education, there is a need to rethink the nature, type and content of a curriculum that has undergone little change since the advent of mass schooling in the 1950s. If schools ignore the contexts in which students live and their experiences, knowledge, capacities and concerns, they run the risk of being increasingly irrelevant, for many young people.

Young people in Western countries today also live in pluralist societies formed by the increased migration of peoples from a multitude of countries and cultures. Boundaries between cultures both within and across countries are more permeable; the mixing of cultures is not seamless but produces struggles which are inextricably linked with both structural power and the power of particular discourses or meanings to define how particular cultural groups might be thought about and acted upon. According to Carson (Carson and Friedman 1995: ix), taking up the challenge of living in such pluralist societies requires an active engagement with the 'diverse ethnic, racial and national issues' which they present. In this context, The New London Group argue for a new notion of citizenship. Speaking primarily, but not only, of literacy the Group argues for a 'civic pluralism',

where differences are actively recognised, where these differences are negotiated in such a way that they complement each other, and where people have the chance to expand their cultural and linguistic repertoires so that they can access a broad range of cultural and institutional resources

(The New London Group 1996: 69)

This may seem beyond the remit of physical education. However physical education cannot and should not pretend that it can remain isolated from the social and cultural world from which children and teachers, nor from the broader social context which both shapes and is shaped by what happens in the name of education. Burrows' chapter in this book provides the example of how physical education has been radically reviewed to incorporate the world view

of the Maori people in New Zealand. This model challenges other governments and physical educators to think radically about the role physical education plays in both reproducing and challenging the power of the dominant ways of thinking about and doing physical education.

EDUCATION IN A POSTMODERN WORLD

Tom Bentley a social policy analyst and Director of DEMOS, UK (2002), points to four key 'structural and cultural changes' of the last two decades which have affected and will continue to affect education. The first and last of these are particularly relevant to teaching and learning in school contexts:

- an economic shift towards service-based and knowledge-intensive industries;
- the creation of societies and communities characterised by social diversity, fluidity and networks where 'traditional forms of authority and social identity exert less influence;
- major demographic changes and changes in the kinds of working lives that young people of today can expect as compared to those of their parents; and
- advances in information and communication technologies (ICTs).

(Bentley 2002: 2)

According to Bentley (2002: 2), service-based and knowledge-intensive industries depend on innovation and creativity which, in turn, require workers who have 'a new set of generic skills and qualities, centred on teamwork, communication and the ability to manage one's own learning, alongside specialist and technical knowledge'. Like many other writers (e.g. Hinkson 1991; Kenway and Bullen 2001), Bentley also argues that ICTs will have a profound impact on the nature of teaching and learning. As learners have greater access to proliferating information channels and sources, 'alternative ways to sort, combine and evaluate knowledge in a sea of information' are required (Bentley 2002: 2).

The New London Group (1996) warns, however, that schools should not simply be about producing compliant docile workers. While not underestimating the necessity for schools to provide students with the opportunities to develop the skills necessary for access to new forms of work, The Group (1996: 67) argues that schools should also provide the means for critical engagement – that is, 'the capacity to speak up, to negotiate, and to be able to critically

engage with the conditions of their working lives'. As Thomson and Comber (2002) point out, many curriculum and policy documents do include goals and outcomes pointing to social learning, active citizenship and student participation. The full realisation of these outcomes for all students, however, has often been constrained by the competing agendas of accountability, performance management and standardised testing. This is not to say that opportunities do not exist in school education for active student participation and the inclusion of students traditionally locked out from responsibility, decision-making and relevant learning. Thomson and Comber describe a number of approaches, and point to the potential of health education and health promotion as sites which are specifically given an imprimatur to 'engage' students, to work with meaningful knowledge, to value their contributions and to engage in advocacy. Other characteristics of the approaches they describe, which are relevant to this book, are 'the importance of working in groups, (and) engaging in cooperative work on team-based action oriented curriculum' (Thomson and Comber 2002: 2).

It is clear from the arguments above that it is the responsibility of schooling to assist the student in developing skills and qualities and particular forms of learning practices, that will enable them to participate in a changing workplace, where specialist and technical knowledge will be rapidly superseded, and to participate in a changing and complex social world, where they will be constantly confronted with enormous amounts of information which may be contradictory and confusing. What are the generic skills they will require to do this and how are they acquired? In the literature there are frequently repeated references to 'deep learning', 'access to deeper, more enduring forms of understanding', 'the need to sort, combine and evaluate knowledge', 'the ability to manage one's own learning', 'communication and teamwork', (Bentley 2002), rich conversations that built on children's life world experiences and 'funds of knowledge' (Thomson 2002), the ability to critically engage with social meanings and so on.

Implicit in all of these concepts is an understanding that learning is not simply about the transmission of a relatively fixed body of knowledge but about meanings as constructed through the activities of learners as they engage/interact with their environment. A second assumption is that the process of learning and knowing is more important than particular facts or even technical skills since knowledge is not fixed and specialist skills may rapidly be come out of date. A third assumption is that to be active participants in a world characterised by

social and cultural diversity people need to be able to critically engage with that world - with socially produced knowledge, with workplace expectations and from the point of view of the authors of this book with the values and social practices associated with physical activity and physical culture (Kirk 1997). They also need to be able to deal with the uncertainty of conflicting and changing knowledge and to make sense of such knowledge so that they can make choices about how they will act.

DEFINING TERMS

We would argue that critical thinking, critical inquiry and problem-solving together with related concepts such as critical reflection, critical engagement are some of the main abilities/capacities needed by young people in these 'new times'. The meanings ascribed to each of these terms in the academic literature and in general use in education contexts are not always shared by those who use them and in some cases are the subject of considerable debate. Critical thinking and critical inquiry, in particular, seems to be used almost interchangeably by two rather different groups. There are however discernable differences between those who tend to espouse the development of critical thinking as one of the main responsibilities of schooling and those who use the term 'critical' or 'social inquiry'

Proponents of 'critical thinking' tend to draw on a philosophical tradition of 'logical reasoning', attention is directed to problem-solving, reasoning and higher order thinking skills. According to McPeck (1981: 7), for example, critical thinking involves a 'judicious use of scepticism'. He suggests that '(l)earning to think critically is in large measure learning to know when to question something, and what sorts of questions to ask'. Critical thinking can engage a social dimension. For Rudinow and Barry (1994) and Brookfield (1987), for example, it involves 'unsettling deeply held beliefs' through the examination of one's own and others' beliefs, through challenging assumptions and claims to universal truths. Rudinow and Barry (1994: 20) argue that 'critical thinking is necessary if we are to make sense of what we hear and read, gain insight into the information and claims that bombard us, make discussions more illuminating, and develop and evaluate our positions on issues.' The emphasis, however, remains on the process, that is the teaching and learning of thinking skills, rather than on what kind of knowledge is questioned. In the context of physical education, Drewe and Daniel (1998) argue that critical thinking can be learned through the teaching of games, specifically where a movement education approach is adopted. They also suggest that critical thinking can contribute to improved performance and to the acquisition of the 'practical knowledge' which

is at the core of physical education. In this volume the work of Bell and Penney provides an example of how the tenets of critical thinking have been used in the development of the PlaySMART programme in the UK.

In contrast to a focus on specific skills of reasoning, but still with an interest in students as enquirers, is another approach to critical inquiry which draws on critical and social theory for its rationale. Proponents of this approach are primarily interested in assisting students to examine and challenge the status quo, the dominant constructions of reality and the power relations that produce inequalities, in ways that can lead to advocacy and community action. This approach has influenced the most recent developments in physical education syllabi in Australia and New Zealand. The syllabi for both junior and senior secondary students in these countries have an explicit commitment to a 'socio-cultural' perspective, achieved through engaging students in critical inquiry. The various interpretations available around the term 'critical inquiry', however, have left considerable spaces for the way in which 'socio-cultural' is interpreted in practice. In this volume, the chapters by Burrows and Gard draw on this approach to explore how different forms of movement can challenge both traditional ways of thinking about, and of doing physical activity. They also propose that physical activity, as a site for the production of knowledge and social values, can be a fruitful context in and through which to examine those values and to recognise the means of their production. This theme is taken further in Wright's chapter where media sports texts are examined for the ways in which they can both (re)produce and challenge dominant social and cultural constructions of race, gender and generation.

Related to both of these approaches to critical thinking and critical inquiry and in some ways underpinning them, is an approach to teaching and learning in physical education that draws directly and explicitly on learning theory, and most notably the various forms of constructivist learning theory. For those drawing on constructivism, there is usually a specific interest in one or more of the following concepts: 'problem-solving', 'reflection', 'critical reflection', 'student-centred learning' and/or 'critical engagement'. Specific attention is paid to how students make meaning, how they construct knowledge and how this can best be 'scaffolded'. This approach is discussed in detail by Macdonald in chapter two of this volume. Many of the authors in the volume (e.g. Fitzgerald and Jobling; Griffin and Sheehy; Hastie; Mallett) draw specifically on a constructivist framework to explain their purpose and the specific strategies they engage to assist students' learning.

IN THE CONTEXT OF PHYSICAL EDUCATION

As Thomson (2002) and others point out (Tinning *et al.* 2001), schooling is about developing particular kinds of citizens, both explicitly – for instance, the 'active citizenship' described in many policy and educational documents and implicitly – individuals who conform to social values and contribute to society. Physical education has historically legitimised its existence because of its contribution to this enterprise and as the notion of the 'citizen' has changed so too has physical education (Tinning *et al.* 2001). For instance in Victorian England, physical training was instituted in elementary schools to produce a healthy and docile workforce (Kirk 1999). In the twentieth century, physical education in the English speaking world has continued to be concerned with the health of young people; but in practice until recently has primarily been a site where the learning of physical skills and knowledge about games, dance, gymnastics has taken place. Its concern has been the development of physical competence and/or the necessity of physical activity/exercise to good health. While this clearly remains a central concern of physical education, there are increasing calls for a physical education which is responsive to contemporary societies and cultures and a physical education that is also able to address broader cross curriculum goals (in the UK) or curriculum frameworks (in Australia); and which is able to make a contribution to imperatives generated by these new times.

In addition those areas of social life which are the concern of physical education are themselves radically changing. As the nature of work changes so does the nature of leisure. The forms and practice of sport and physical activity are increasingly influenced by commodification and consumerism and the shift away from team sports to individual recreational activities pursued in many different ways. It is argued (Tinning and Fitzclarence 1992) that if physical education ignores these changes it will become increasingly irrelevant not only to children and young people but to those making decisions about what should be included in the curriculum and what not.

What contributions does physical education have, then, in the making of citizens in new times? Tinning and Fitzclarence and others (e.g. Fernandez-Balboa 1997; Kirk 1997; Laker 2002), argue for a new approach to physical education which takes account of new times and the experiences and interests of young people who live in worlds often vastly different from those who have framed traditional forms of physical education. Kirk (1997: 58), for instance,

argues that physical education programs must 'start to both reflect and contribute more directly to popular physical culture'. He challenges the dominance of team sports sport in physical education and argues for radical changes to ways of thinking about the organization of physical education, the kinds of physical activities that count and forms of pedagogy employed. He goes on to argue that together with new ways of engaging students in physical activity, physical education should also assist students in becoming critical of the practices associated with popular physical culture. He quotes George Sage to exemplify such an approach:

Critical social thought applied to sport is not critical simply in the sense of expressing disapproval of contemporary sport forms and practices; instead its intent is to emphasize that the role of sport scientists needs to be expanded beyond understanding, predicting and controlling to consider the ways in which the social formations of sport can be improved, made more democratic, socially just and humane.

(Sage 1992, quoted in Kirk 1997: 59)

Over the last five years or so, syllabus writers have not been unresponsive to the challenges posed by changing social and cultural contexts. In the remaking of physical education syllabi in the late 1990s and 2000s syllabus 'goals', 'statements' and 'standards' have usually included references to the concepts of understanding diversity, problem-solving, critical thinking and critical inquiry. There has been a shift of emphasis to the student as learner, not only of particular forms of physical practices (e.g. motor skills) but as one who can engage in problem solving, collaborative learning and perhaps to a lesser extent critical inquiry. There has been an expectation that physical education will also contribute to the wider educational goals of providing opportunities for students to learn how to engage with knowledge – that is, that physical education will engage students in activities which require critical thinking, critical enquiry, problem-solving and collaboration with others in the process of learning.

However the ways in which these concepts have been taken up differ considerably both between and within countries and have very much depended on local political, economic and cultural circumstances. For instance, in the UK, the policy document, *Sport: Raising the Game* was produced by the Department of National Heritage (which no longer exists) in a context where concerns about the apparent decline in participation and the lack of success of UK athletes in international competition generated a set of imperatives which saw a focus on

sport resurrected in syllabus documents. In Australia and New Zealand, the integration of health education with physical education has produced a different set of expectations that influence what it is possible and not possible to do in physical education. In the USA, the absence of national curriculum makes it difficult to talk about commonalities in practices across states, although the National Standards for Physical Education (NASPE 1995) provides some guidance on current understandings of the physically educated individual from the North American position.

Despite these different contexts, there has, however been a discernible shift in most physical education syllabi over recent years. This shift seems to reflect two key influences on curriculum planning and the kinds of practices that can constitute the physical education lesson. The first influence can be understood as an increasing emphasis on the social or the socio-cultural aspects of physical education; the second the influence of cognitive theories of learning which have come to dominate learning theory in education more widely. Neither of these are new; in particular a socio-cultural perspective has been argued for by those espousing a critical pedagogical position in physical education for some time (e.g. Crum 1993; McKay *et al.* 1990; Wright 1996). What has changed is that these approaches have moved into the mainstream of physical education and been incorporated formally into curriculum aims and goals and into ways of teaching physical education.

In Australia and New Zealand, a socio-cultural perspective now underpins most syllabi particularly in the senior years. This has been particularly promoted and facilitated by the joining of health or health education with physical education (HPE). The socio-cultural perspective has been interpreted in a number of ways, none of which are mutually exclusive, ranging from a knowledge of social determinants (e.g. participation in physical activity) to advocacy for social justice as promoted in the Ottawa Charter. In Australia and New Zealand the integration of HPE has also meant that physical education for junior as well as senior students may include classroom based lessons where students explicitly learn about physical activity, exercise and sport. In both the UK and Australia, national curriculum goals and curriculum frameworks which describe the goals or aims of schooling more widely have also provided an impetus for different ways of writing syllabuses and in the UK spaces for subverting physical education syllabuses (Penney and Evans 1999). For instance, the learning outcomes of the Queensland years 1 to 10 Syllabus (Queensland School Curriculum Council 1999) are designed to assist students become lifelong learners. The kind of attributes

articulated in this document link closely with those described above in relation to critical thinking, critical inquiry and problem-solving. They are specified as follows:

- a knowledgeable person with deep understanding (decision-making)
- a complex thinker (solve problems, make judgments about accuracy of information, engage in what later defined as elements of critical inquiry)
- a creative person (problem-solving – 'explore options and consequences of their choices .. think laterally')
- an active investigator ('pose problems, develop hypotheses, initiate and answer questions')
- an effective communicator (... use individual and group performances to express ideas)
- a participant in an interdependent world
- a reflective and self-directed learner (can critically reflect on ways in which socio-cultural factors...; critically evaluate assumptions and viewpoints and give reasons to justify conclusion and assertion ..).

(Queensland School Curriculum Council 1999: 2-3)

The contribution of the Health and Physical Education Key Learning Area (HPE KLA) is specified in relation to each of these attributes. One example will provide an indication of how these are elaborated in relation to the learning opportunities designated for years 1-10 HPE.

Reflective and self-directed learner

Learners critically reflect on ways in which sociocultural factors shape personal identity, relationships and participation in physical activity, and consider ways to manage these influences. Learners investigating issues of health, physical activity and personal development reflect on:

- what they have learned;
- how they have learned;
- how they can transfer what they have learned to new situations;
- the impact of their actions on themselves, others and the environment.

They critically evaluate assumptions and viewpoints, and give reasons to justify conclusions and assertions. They plan, monitor the effectiveness of their plans, and use these conclusions as a basis for further action towards the promotion of health and personal development and participation in physical activity.

(Queensland School Curriculum Council 1999: 3)

In the UK and the USA, physical education remains quite separate from health education and at least for most of high school, physical activity remains the primary medium for learning in, through and about the physical (Kirk 1997). Social justice perspectives are more likely to be incorporated into notions of appropriate behaviour towards others and sensitivity to difference and diversity. For instance, the document *Moving into the Future: A guide for content and assessment* produced by the National Association of Sport and Physical Education (NASPE 1995) includes in its content standards competencies which relate to the social and interpersonal as well as to movement and motor skills. For instance, numbers 5-7 of the competencies of a physically educated person are as follows:

5. Demonstrates responsible personal and social behavior in physical activity settings
6. Demonstrates understanding and respect for differences among people in physical activity settings.
7. Understands that physical activity provides opportunities for enjoyment, challenge, self-expression, and social interaction.

(NASPE 1995: 1)

The influential American physical educator Darryl Siedentop was more specific concerning the contribution physical education can make and should make to living in contemporary societies. He argued that students need to be 'involved critically in the sport, fitness and leisure cultures of their nations' (in Tinning, 2002: 338) and that physical education teachers need to produce activity enhancing environments to facilitate the development of physically educated citizens:

- To be adaptable and live with uncertainty;
- An interest in the meaning of activity to young people;

- Skills in working with people across institutional boundaries;
- To be competent leaders
- To know how to engage children and youth in critical ways with the subject matter.

(Tinning 2002: 388)

In the UK the emphasis on social justice issues is also less obvious until the senior years. However, physical education in the UK has a long tradition of learning *through* movement and the most recent iterations of this tradition are approaches such as teaching games for understanding (TGFU) and games sense (ref Thorpe and see Griffin in this book). At the same time these are underpinned by a notion of equity and social justice – so much so that there has been something of a backlash from traditional sport advocates who see such approaches as undermining and diluting the competitive team sport ethos and the capacity of the UK to compete in international competition. Nevertheless the UK *A-level Physical Education* (Kirk *et al.* 2002) does provide spaces for a more critical examination of physical activity. It is underpinned by four principles: interaction of knowledge, making knowledge personal, equity and inclusion, and synopsis. These each provide opportunities for a critically reflective approach to physical education.

For instance, in relation to the principle, 'equity and inclusion', students are advised that it is about valuing and celebrating 'diversity and difference between societies and cultures in relation to sporting interests, traditions and behaviours' (Kirk *et al.* 2002: 11). Applying the principle of 'making knowledge personal' involves:

- discovering the links between what you already know or can do and the new information and challenges that you encounter;
- working out which pieces of information within a whole range of new knowledge you should attend to;
- becoming more aware of how you learn and being better able to learn from experience; seeing the relationships between the local, national and global contexts in which you live; and
- learning through critical reflection on your experience and the experiences of others.

Penney and Evans (1999) suggest that the National Curriculum cross curricular competencies also provide spaces for ways of doing physical education which go beyond the apparently limited scope of the sport dominated National Curriculum in Physical Education. They draw on Mawer (1995) to argue that to meet the National Curriculum objectives 'a variety of teaching styles and strategies' are required. In relation to physical education this would mean 'addressing the development of 'decision-making, problem-solving and person and social skills'; this would in turn require that students take greater responsibility for their own learning and teachers take on 'a more facilitatory and mentoring role' (Penney and Evans 1999: 133).

CRITICAL INQUIRY AND PROBLEM-SOLVING IN PRACTICE

The following chapters in this volume are designed to locate specific examples of critical inquiry and problem-solving in physical education in their theoretical contexts. As has already been pointed out there is no one way of understanding the concepts of critical inquiry and problem-solving and no attempt has been made in this collection to privilege one interpretation above any other. Rather what has been important is that the frameworks on which each author are made explicit at the beginning of each chapter. Part one of the book is completed by Macdonald's chapter on learning in physical education which discusses in detail the pedagogical frameworks that underpin many of the following chapters.

In part two of the volume, the chapters are primarily, although not only, concerned with the practice of physical education as it directly involves students engaging in physical activity. In some school systems, this will parallel physical education in the early and middle years of secondary schooling, in others it will have relevance across all years and we would argue to physical education as it is practised in tertiary education contexts. The first of the chapters in this section are concerned with the way students can be engaged in problem-solving through physical activity. For Griffin and Sheehy this is through teaching games for understanding, for Hastie, through the medium of sport education and for Bell and Penney through the PlaySMART. Gard also examines the potential for dance as a site for problem-solving but goes further to ask how dance might also be a site for challenging dominant social and cultural meanings. The chapters by Fitzgerald and Jobling and Macdonald both look to the possibilities of student centred learning and in Macdonald's chapter the potential of physical

education contexts for the implementation of an integrated approach to curriculum and pedagogy. Burrows uses the example of Maori models of health and physical education to examine the potential of physical education to incorporate and explore diverse cultural perspectives.

Part three reflects recent developments in physical education, particular in senior secondary contexts, whereby physical activity has come to be understood as a personal and social practice about which information can be collected and examined for a range of educational purposes. This section of the book provides a number of examples of how this might happen, ranging from those which focus of possibilities of learning particular forms of knowledge within the field using a critical inquiry/problem-solving approach (see for example the chapters by Mallett and by Sanders) to those which question the knowledge and social relations associated with sport and physical activity (i.e. the chapters by Gard and by Wright). As a final example of practice, Glasby and Macdonald's chapter raises the issue of what forms of relations between teachers and students are needed if problem-solving and critical inquiry are to take place effectively. They argue for a negotiated curriculum where students are actively involved in decision-making about what they do and how they do it.

In the final chapter Kirk locates the earlier chapters historically and in relation to contemporary social theory in education. He argues the need for such an approach but points out the challenges which face those who would be innovative in the ways proposed by authors in this book. Each of the writers however demonstrate through their examples of their own involvement in secondary and tertiary physical education contexts that it is possible to think and do physical education differently and we invite readers to think themselves into the possibilities provided here to create enjoyable and challenging physical education experiences for their students.

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