A critical challenge:
developing student's critical abilities

Lorna Gillespie - University of Waikato and **Sue McBain** - University of Canterbury

The work of educators includes grappling with the challenges of bringing theoretical concepts and approaches into day-to-day physical education practice for quality programmes and the betterment of student learning. One of our most exciting challenges is in capturing the potential the *Health and Physical Education in the New Zealand Curriculum* (MoE, 1999) and the *New Zealand Curriculum* (MoE, 2007) present to us as physical educators. The curriculum has encouraged the development of socio-critical perspectives and inquiry-based approaches to teaching and learning programmes (Culpan & Bruce, 2007; Fitzpatrick, 2010; Gillespie & Culpan, 2000; Wright, 2004). We (the writers) have tackled the theory to practice challenge of the development of student's critical abilities from a range of positions within education. Our involvement in initial teacher education, teacher professional development, secondary physical education teaching and physical education advisory roles has meant we have needed to not only develop our own practice as educators, but also consider how to successfully enable secondary school students, teacher education students and practicing physical education teachers to understand and implement a socio-critical physical education curriculum. This paper focuses on processes, knowledge and understandings that support the development of student's critical abilities.

WHY DEVELOP CRITICAL SKILLS?

Why might we want to enable our students to develop critical skills, beyond 'because that's what the curriculum says'? Our teaching and learning programmes include providing students with opportunities to make meaning of and better understand themselves and their world. With a critical perspective, they can challenge these understandings. Within physical education, this includes understanding the influences on and between self, others, society, particularly within the movement culture. Becoming critical and discerning consumers of, and participants in, the movement culture provides students with new ways of seeing their world, and an understanding of the role and significance of physical activity in our lives. Additionally, students with critical ability will be more likely to notice and question assumptions and taken-for-granted practices that may not be equitable or inclusive. In turn, an awareness of the need for change and a desire to contribute to change can be generated. This has real relevance to their lives beyond physical education as critical thinking opens our eyes to new ways of thinking and a willingness to explore alternatives. Consequently, we may be less likely to discredit other ways of thinking or being. By being able to see through the eyes of others, and understand a range of perspectives, we position ourselves to be more mindful and aware of social justice. In addition we can recognise our place in contributing to any desired change (and avoid reinforcing potentially damaging status quo). Critical thinking is thinking for life, and is an essential skill for the development of autonomous learning and lifelong learning (Brookfield, 1994).

As teachers, applying a critical lens to our own work can enable us to reconsider aspects of our programmes, our pedagogy and our assessment choices and practices while we continue to strive to provide quality programmes that are equitable and inclusive. Physical education programmes developed from the curriculum and with consideration of students needs are well placed to provide a positive influence in the lives of all young people. Reflecting critically on our teaching helps ensure the influences remain positive.

Critical thinking is defined as "examining, questioning, evaluating and challenging taken-for-granted assumptions about issues and practices", (MoE, 1999, p.56). Using critical thinking within processes of critical evaluation / inquiry / analysis will enable students to examine and challenge the status quo, recognise power relations that contribute to inequalities and be moved to contribute to advocacy and action for change. Applying critical thinking as per curriculum definition and intent moves beyond critical thinking defined as using higher order thinking processes or logical and reasoned thinking. While the latter are also necessary skills, the difference in potential learning outcomes from working from these two definitions is considerable. It is the sociological nature of the critical analysis that sets it apart from higher order thinking and provides the potential for physical education to contribute to the development of students critical disposition and critical abilities.

We have sought to devise processes that support the development of student criticality and ability to critically analyse, particularly in senior physical education programmes. In doing so, we recognise a range of skills and attitudes that weave together to further support the development of critical abilities. We have called these "tools" and many of them appear to be pre-requisite for students being able to critically analyse and are able to be developed during physical education programmes throughout the secondary years.

THE CRITICAL ANALYSIS PROCESS (CAP) TOOLBOX

The CAP provides a structure to guide students and teachers in their endeavors to critically analyse. We have found it is

desirable to initially provide students with a scaffolding of thinking 'tools' prior to utilisation of the CAP.

SOCIAL CONSTRUCTION AS KNOWLEDGE FOR STUDENTS

Not only are we asking the students to engage in a critical constructivist learning process, are we asking students to understand the theory of social construction as it applies to their lives. This involves analysing and interpreting knowledge from a broad range of sources and perspectives. As most students have little knowledge and experience of the ways their environment shapes their reality, it is becomes significant to highlight this complex process (Kincheloe, 2005). Student understanding of the theory of social construction is a foundational thinking tool that allows students to understand how society shapes their reality.

VIEWING THE WORLD WITH 'FRESH EYES'; AND UNDERSTANDING MULTIPLE PERSPECTIVES

The understanding that every person has a different view of reality developed from a complex factors such as their experiences, family, friends, gender, religion and environment, is an essential early step in the recognition of the existence of multiple realities and perspectives (Azzarito & Ennis, 2003; Cobb, 1996; Kincheloe, 2005; Light & Wallian, 2008; Pritchard & Woollard, 2010; Richardson, 2003). Developing a sociological imagination (Mills, 1967) and learning to view the world through others eyes (Andreotti & de Souza, 2008) includes understanding that while we may consider our own knowledge to be neutral and indisputable, our perspective is socially, politically, economically, environmentally, ethically, culturally, historically (SPEEECH) constructed and is in reality often different from others. Exposing students to multiple perspectives provides opportunity for them to view the world through 'fresh eyes', through the eyes of others (Andreotti & de Souza, 2008) and as Gorden (2000) suggests, to make the familiar strange. Students who are closed to new ways of thinking will inevitably ignore or discredit other realities and this hinders their ability to critically analyse. In response to this reaction it is helpful for teachers to develop a class culture that recognises and welcomes the benefits of viewing the world with fresh eyes and understanding others perspectives. This can be achieved through encouraging students to learn to unlearn and learn to listen, (Andreotti & de Souza, 2008). Strategies such as cooperative learning donuts exploring others opinions, retelling fairy tales, myths and legends from multiple perspectives, deconstructing incidents from varying actors perspectives and role plays are a few activities useful for the development of these thinking tools.

MAKING MEANING AND JUDGMENTS; UNDERSTANDING ASSUMPTIONS AND IDENTIFYING PERSONAL INFLUENCES

Collective learning experiences and discussion amongst students can facilitate the identification of stereotypes and assumptions by creating shared meaning making processes. This process allows students to understand that making meaning is both an individual activity in which participants draw on previous knowledge as well as a social activity where, through a complex interactions with others, shared meaning is developed (Pritchard & Woollard, 2010). Deconstruction of observed incidents within physical education or sport, text and visual images (such as YouTube videos) can develop student's understandings of assumptions and stereotypes. This can be achieved through a number of methods including the use of quick fires responses to visual images and the use of the acronym 'SPEEECH' as an analysis tool to deconstruct the origins of individual meaning making. These understandings are important in the development of student's sociological imaginations and criticality. Students understanding of assumptions and stereotypes in sport and physical activity can be deconstructed with students initially identifying who has influenced the promotion of this assumption, and through application of their sociological imagination (Mills, 1967) they complete an analysis of the consequences for those who are implicated. Within this process students are simultaneously considering knowledge, understanding social construction and also reflecting on their personal knowledge, resulting in the production of new knowledge (Kinchloe, 2005). It is suggested that initially examples are impersonal, non-threatening, with introduction of the personal role modeled by the teacher revealing how their own perspectives came to be constructed and how the social values, ideologies and information they encounter shape their pedagogies and worldviews.

UNDERSTANDING POWER AND HEGEMONY

Understanding the notion of power, and therefore explicit teaching about power, is central to student's capacity to develop their critical abilities. We contend that students have prior understanding of power relationships, which have been lived and learned throughout their lives, and with explicit teaching they can understand the nature of power relationships by drawing on their own or observed experiences. Simulated games, such as the "food chain game" allow students to experience power in an objective and safe activity, which becomes a metaphor for real world power relationships. Initially power relationships in the metaphorical game can be deconstructed, and then compared to societal power relationships or students own experiences. Exploring power relationships through the initial deconstruction of the impersonal, (in wider society, sport, media, business, government) and latterly aspects of their own sphere of experience (e.g. teacher students relationships, bullying, friendships), enables students to develop their critical abilities, and provides a language to express their understanding of the nature of power relationships. The following questions are appropriate when fostering student's critical abilities:

• Who has power and who is powerless in wider society, in the school, my sports team or in my whanau or family?

- How do powerful groups or people maintain power?
- How do those who have less power stay powerless or gain power?
- In each of these situations who influences what we think and how?

The thinking tools and content knowledge outlined in the above section are essential scaffolding in enabling students to effectively develop their ability to critically analyse and apply to the Critical Analysis Process (CAP).

Table 1. Critical Analysis Process (CAP), (Gillespie& McBain, 2011)

THE PROCESS	Questions, strategies, actions to promote critical thinking, reflection, action. Select questions relevant to the activity
1. Initial learning experience	Students participate or engage with any experience that is relevant for analysis. This can include but is not limited to movement experiences in class and personal experiences, media activities such as adverts, articles and reporting, films, books, stories, texts, etc.
2. Describe **What** you see or experienced	• What do you see in the activity, situation, picture, video, and article? What did you or others experience during the situation or activity? • Who can you see in the activity, situation, picture, video, and article? • Who's missing from the activity, situation, picture, video, and article? • What messages do the activity, situation, picture, video, and article send? • What is the intention or aim of this activity, situation, picture, video, and article?
3. Identify assumptions, stereotypes and social construction theory Applying social construction theory	• What assumptions and stereotypes have been made by those involved directly or indirectly in this activity, situation, picture, video, and article, including you? • How have these assumptions and stereotypes been socially constructed and why?
4. Identify and explain influences Personal reflection on social construction and understanding multiple perspectives	• What are my ideas about this activity, situation, picture, video, and article? • Who and what has influenced my ideas about this? • Who and what has influenced others different ideas about this? • Whose and what are the different points of view about this?
5. Identify sociological ideas and themes • Identify, name and define the sociological themes and knowledge that applies to this activity, situation, picture, video, and article and as related to others ideas. • Name the topics and content you need to know to complete the following steps in the critical analysis process.	**For example:** Social construction of sport Gender – masculinity, femininity, stereotypes, social construction Commodification of the body, athletes, sport, sexuality Sport and business and entertainment Identity – individual, national, regional Technocentricity – body as a machine Body as a project Sport as warfare Sport as aggression, frustration release Globalisation Role of business and media in constructing the above
6. Inquire and investigate: **Gather information and evidence**	• What do others say in support of or disagreeing with different points of view related to this topic • Is there other evidence which supports or refutes differing points of view? (e.g. statistics)
7. Understand the nature of the relationships Identify power relationships / hegemonic social relationships	• Who has the most and least influence in this situation? Who gets to make decisions? • Who is advantaged and disadvantage by the relationships observed in this activity, situation, picture, video, and article? • Who has a vested interested in maintaining the status quo? • Why is / are being portrayed in this way? • Where am I located within the varying positions?
8. Consequences	• What are the impacts/influences/consequences of these power relationships/inequities/social injustices on **self, others and society**?
9. Critical action Consider change and Take action!	• Consider all the discussion and information to this point: make a personal judgment or develop a personal opinion / stance about the activity, situation, picture, video, and article etc. • Examine the need for change and possibilities for individual and group action.

THE CRITICAL ANALYSIS PROCESS: AN OVERVIEW

The CAP has nine phases. Initially students reflect on an 'in action' movement experiences and explore the application of knowledge of social construction and hegemonic social relationships. In later stages of the CAP students examine the consequences of hegemonic social relationships and explore actions for change and social justice. While the structure of the CAP is presented as a linear process in Table 1, the process is more woven and complex and should be utilised in response to student learning needs.

The following is a very brief overview of the stages of the CAP, and outlines the knowledge that scaffolds students' ability to critically analyse.

STEP 1: THE INITIAL LEARNING EXPERIENCE

Experiences, whether in the form of active participation, or through viewing sport media provide effective learning opportunities to reflect on, deconstruct and further investigate students. YouTube clips, movies, advertisements, attending or taking part in events all offer useful initial learning experiences.

STEP 2: DESCRIBE

Learning to 'notice' is a vital precursor to being able to freely describe. Both noticing and the ability to describe are important in developing student's ability to critically analyse. Initially, students may find it difficult to notice 'clues' such as "language, image, frames, camera angles" (Wright 2004 p. 184), text and music. Teacher use of discerning questioning to students facilitates the describe phase of the process. As an alternative to a teacher lead inquiry process, this phase of the process can take the form of an inquiry where students collect quantitative data about a particular physical activity or sporting event or issue.

STEPS 3 AND 4: MAKING MEANING FROM EXPERIENCE; IDENTIFYING ASSUMPTIONS, STEREOTYPES, SOCIAL CONSTRUCTION AND PERSONAL INFLUENCES

Our experiences of developing and using the CAP have shown that the knowledge and understanding of social construction enables students to complete the making meaning steps, which includes students identifying assumptions and stereotypes and understanding personal influences. The linking of the experience and description with the thought, or the 'making meaning' components of the CAP, uses constructivist understandings of learning. This linking between action and thought (Beard & Wilson, 2002) encourages students to draw on their and others understandings to create new knowledge.

The process of 'unpacking' assumptions and stereotypes is fundamental to the development of student's socio-cultural understandings and ability to challenge dominant social constructions. Personal 'making meaning' can be a long and complex process requiring repetition and patience on the part of both teacher and learners. With this in mind,

we recommend the understanding of the theory of social construction is developed prior to using the CAP.

STEPS 5 – 8: UNDERSTANDING POWER AND HEGEMONY

A critical constructivist framework is concerned with issues of power and inequality and the function power plays in "construction and validation processes" (Kincheloe, 2005, p. 3). Exploring how situations and processes privilege some and marginalise others is central to critical analysis, as is gaining an understanding of who has the power to shape both individual and societal reality. Therefore, in addition to understanding social construction, multiple perspectives and seeing the world with 'fresh eyes', the understanding of hegemony is central to students' development of their criticality. Exploring who has and does not have power, how, why and the influences on our thinking through teaching and learning activities can highlight new ways of viewing the world, creating cognitive dissonance and promoting criticality.

STEP 9: CRITICAL ACTION

Critical endeavors aim to follow through to considering possible change and ways of contributing to change. While the CAP's intention is to empower and enable students to make a difference in their world, how, when or if action is taken are not foregone conclusions. The potential can be viewed as the production of difference, through the desire and ability to make a difference by acting for social justice. Therefore we advocate that to teach for difference, we need to know how to teach for difference and with difference, with a view that action will be taken in some form either immediately or in the future.

APPLICATION OF THE CAP TO JUNIOR AND SENIOR SECONDARY SCHOOL

The CAP is defined by its intention to address issues of social justice and equity and to create social action; however the application of the process in the junior and senior physical education is markedly different. Aligned with the achievement objectives at levels 4 – 5 of the New Zealand Curriculum, the CAP in the junior secondary school can be used to deconstruct 'in action', for example, issues around interpersonal relationships, team work, attitudes and values within the physical education class which can be subsequently applied to other contexts. The aim is to build student's awareness of themselves and others, of difference and of influences in their lives. We contend this supports the development of a disposition that is more likely to be critical. In the senior school, aligned with levels 6 – 8 of the NZC, it is envisaged that the CAP will be applied to a varied range of issues within sport, physical activity and physical education domains. For example a critical analysis of gender, violence, performance enhancing drugs or physical activity health promotion within the school and community are common topics. Current and topical issues in the media can also be

teachable moments to apply the CAP to, and develop student's criticality.

The CAP gives students opportunity not only to reflect on inequities and social injustices in wider society, it also gives students the opportunity to understand who they are and what has influenced their perceptions. This can be seen as self-critique; confronting and challenging for adults let alone secondary school students. It is this challenge to the status quo and personal status which often confronts students. We acknowledge that student responses to the consequences of power relationships are, and will be, varied as it is related to higher levels of moral reasoning based on students' internalised values and norms (Watkins, 2005); not all students will be concerned about those who are marginalised.

SUPPORTING THE DEVELOPMENT OF CRITICAL ABILITIES AS A TEACHER

Teaching content and critical thinking skills becomes somewhat irrelevant if students do not also develop the dispositions to view the world through a critical lens (Burbules & Berk, 1999). Dispositions of being open-minded to different (and potentially challenging) alternatives, a readiness to see the 'big picture', having sensitivity to the feelings of others, an ability to generate and accept alternative solutions all support being critical. For these dispositions to be realised, a motivation and a willingness to be engaged in critical thinking and to doubt even our own presuppositions are all-important variables (McBride, 1992). The learning environment we create contributes to or can undermine the development of these dispositions.

Using critical abilities is a way of being as well as a way of thinking. Being critical can mean taking a position that is contrary to the 'norm' and students need to be supported in being able to place themselves in that position. With this in mind, students need to feel they are part of a positive and supportive learning environment. Challenges and debates need to be based on respect rather than power. In addition to creating the environment for critical thinking and questioning, there are teacher behaviours that will enhance the development of critical abilities. Important teacher strategies for the facilitation of student critical analysis include encouraging questioning, thinking out loud, facilitating thinking and learner questioning. In addition teachers can model what it means to be critical, and acknowledge moments of discomfort about our own views. The development of critical ability is social in character, and therefore both institutions (and learning environments) and social relations can foster or suppress it. The collective questioning, deconstruction and creativity are also social activities and it is these interactions that challenge alternative views and create new meanings.

FINAL COMMENTS

Developing student's critical abilities is a worthwhile and

necessary aspect of physical education, given that it supports their ability to make meaning of their world and make a difference within it. Critical thinking and critical ability develop over time, not suddenly when our students get to Year 12. Viewing the use of critical abilities as a way of being, not just a way of thinking, guides us to provide learning environments throughout our Year 9-13 physical education programmes that value and foster questioning and the challenging of taken-for-granted assumptions.

REFERENCES

Azzarito, L., & Ennis, C. (2003). A sense of connection: toward social constructivist physical education. Sport, Education and Society, 8(2), 179-198.

Andreotti, V., & de Souza, L. M. T. M. (2008) Global learning in the knowledge society; four tools for discussion. Journal of Development Education Research and Global Education, 31, 7-12.

Beard, C., & Wilson, J. P. (2002). The power of experiential learning: a handbook for trainers and educators. London, UK: Kogan Page Limited.

Brookfield, S. (1995). Becoming a critically reflective teacher. Jossey-Bass, San Francisco

Burbules, N., & Berk, R. (1999). Critical Thinking and Critical Pedagogy: Relations, Differences and Limits. In T. Popkewitz & L. Fendler (Eds.), Critical Theories in Education: Changing Terrains of Knowledge and Politics (pp. 45-65). New York: Routledge.

Cobb, P. (1996). Where's the mind? A coordination of sociocultural and cognitive perspectives. In C. T. Fosnot (Ed.), Constructivism: theory, perspectives and practice (pp. 103-119). New York, London: Teachers College, Columbia University.

Culpan, I., & Bruce, J. (2007). New Zealand Physical Education and Critical Pedagogy: Refocusing the Curriculum. International Journal of Sport and Health Science 5, 1-11.

Fitzpatrick, K. (2010) Stop playing up! A critical ethnography of health, physical education and (sub) urban schooling. Unpublished PhD thesis, University of Waikato.

Gillespie, L., & Culpan, I. (2000). Critical thinking: Ensuring the 'education' aspect is evident in physical education. Journal of Physical Education New Zealand, 33(3), 84-91.

Gillespie, L. & McBain, S. (2011). A Critical Analysis Process – bridging the theory to practice gap in senor secondary physical education. Teachers and Curriculum, 12, 65-72.

Gorden, W. (2000). Synetics. In B. Joyce, M. Weil & E. Calhoun (Eds.), Models of teaching (6th ed.) (pp. 215-245). Needham Heights, MA: Allyn and Bacon.

Kincheloe, J. (2005). Critical constructivism primer. New York: Peter Lang Publishing.

Light, R., & Wallian, N. (2008). A constructivist-informed approach to teaching swimming. Quest, 60, 387-404.

McBride, R. (1992). Critical thinking - An overview with implications for physical education. Journal of Teaching in Physical Education 11, l12-125.

Mills, Wright C. (1967) The sociological imagination. England, Oxford University Press

Ministry of Education (1999). Health and Physical Education in the New Zealand Curriculum. Wellington: Learning Media.

Ministry of Education (2007). The New Zealand Curriculum. Wellington: Learning Media.

Nemiroff, G. H. (1992). Reconstructing education: toward a pedagogy of critical humanism. London: Bergen & Garvey.

Pritchard, A., & Woollard, J. (2010). Psychology for the classroom: constructivism and social learning. New York: Routledge.

Richardson, V. (2003). Constructivist pedagogy. Teachers College Record, 105(9), 1623-1640.Watkins, C. (2005). Classrooms as learning communities: What's in it for schools? London: RoutledgeFalmer.

Watkins, C. (2005). Classrooms as learning communities: What's in it for schools? London: RoutledgeFalmer.

Wright, J. (2004). Critical Inquiry and problem solving in physical education. In J. Wright, D. Macdonald & L. Burrows (Eds.), Critical inquiry and problem solving in physical education (pp. 3-16). New York: Routledge.