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Toward a broader appreciation of human motion in education

Graham Douglas Dodd, BA, AUA (PE), Dip T (Secondary)

Thesis submitted in fulfilment of the requirement for the degree of Doctor of Philosophy

School of Social and Cultural Studies in Education
Deakin University

March 2003
Deakin University
Candidate Declaration

I certify that the thesis entitled:

**Toward a broader appreciation of human motion in education**

submitted for the degree of Doctor of Philosophy is the result of my own work and that where reference is made to the work of others, due acknowledgment is given.

I also certify that any material in the thesis that has been accepted for a degree or diploma by any other university or institution is identified in the text.

Full Name: Graham Douglas Dodd

Signed: __________________________

Date: 31 March 2003
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Abstract

Motion is a fundamental activity for the healthy functioning human organism. Its importance, however, is increasingly de-valued in Western cultures as they speed toward adopting technologies and virtual experiences as adjuncts to, and even replacements for, traditional educational structures and processes that involve physical activity. Organised and reflective experience of human motion is becoming increasingly marginalised in teaching methodologies and learning programs in educational institutions at all levels around the globe.

This inquiry sets out to gain a greater understanding of why people and human motion become disconnected, particularly during periods of formal education. A central question and two sub-questions form the basis of the inquiry. The central question asks why human motion is not valued and more utilised in education. In particular, why do learning areas that directly represent involvement with human motion, such as physical education, continually struggle in education programs. It directs the investigation to focus on the causes rather than the symptoms of the disuse and devaluation of human motion in Australian education. The two sub-questions split the praxis of the study. The first seeks to understand how the causes of devaluation work in the educational context to affect the lack of acknowledgement; and the second considers ways to counter the disuse of human movement in education programs.

To address these questions, the research focuses on rebutting the notion of a mind-body dualism. Rather, it seeks to better understand how humans learn and function as monists – integrated beings, acquiring self-knowledge in their 'world of being' in which bodily and emotional experiences, and reasoning are inextricably intertwined.

I have approached this qualitative research as an ethnographic sociologist examining the issues from a critical high modernist perspective in order to demonstrate the pervading influence in Australian education of strong beliefs and values from the era of Enlightenment. Narrative analysis of 'memoir' in the form of self-defining memories was selected to gain a sensibility of the connectedness between human emotion, motion and reasoning in the lived experiences of students in three primary and three secondary schools across Years 2-12. An opportunity for human movement to be more valued and utilised in emerging educational frameworks that have life knowledge, dispositions and capabilities at their core is identified.

The inquiry proposes a conceptualisation of human motion in education for new times characterised by the need for people to develop personal resources and strong positive identities in order to cope with a world of rapid change and uncertainty.
Acknowledgements

This thesis is the highlight of my personal and professional life’s journey so far in physical education. I have been most fortunate to be surrounded by people genuinely interested in my plight. Among these, three principal supervisors at different stages sensitively mentored me to complete the doctorate. In their own way, each made a special contribution to my understanding and explanation of my feelings, the issues involved, and the strategies I needed to consider in order to effectively proceed with an inquiry of this nature.

Professor Richard Tinning encouraged me to begin a doctoral study. He understood the need within me to face the challenge of ‘my unfinished business’ relating to the decline in physical education. Associate Professor Lindsay Fitzclarence inspired me with new ways of thinking about the deeper interrelationships between an individual and their movements, and their spirituality. He carefully and tirelessly guided me with regard to theories that gave the inquiry meaning and substance. Dr Chris Hickey willingly provided constructive suggestions in a practical and empathetic way to soundly build the thesis for maximum effect. Superb objective suggestions from my colleague Barbara Brougham clarified and made very clear what I was trying to communicate.

Without these highly committed professionals and their friendships, I would not have been able to write this thesis with the strength and expression presented. My gratitude and thanks to each of them is enormous.

I am blessed to have triplet teenage children in Lucy, Emma, and James, and a journey like this would not have been possible without the special love and acknowledgement that recognised my need to face the challenge. They gave me some space to do it. Finally, all of the above would not have happened were it not for the complete love and understanding of my wife, Carmel, who had to continually put up with my anxieties and frustrations over the study, and who never once faltered in her support.

So… to dear Carmel, Lucy, Emma, and James, I dedicate this thesis to you hoping that it will repay in some small way all that you have had to bear over the last seven years.
Toward a broader appreciation of human motion in education
chapter 1

Introducing the study

With a career in physical education of more than 35 years teaching, writing, researching and lecturing I begin this thesis with a memory of my own.

1.1 A personal memory

It was during the citation reading by Professor Lynn Embrey (President) bestowing Life Membership on me from the Australian Council for Health, Physical Education and Recreation (ACHPER) in January 1998, that an amazing feeling of inadequacy came over me. I had no idea that I was going to receive this honour from Australia’s peak body for health, physical education, recreation and sport. As Program Director for the 1998 biennial international conference ‘Key into Life’, I had dutifully scheduled a timeslot for the ceremony at the request of the National Executive without any notion at all of my impending fate. Professor Embrey came upon a sentence that triggered powerful emotions in me.

As coordinator of Daily Physical Education, you not only gave us a model of curriculum research and development and teacher development that is yet to be surpassed but you helped to establish ACHPER’s commercial basis that still serves us well.
(Colvin 1998, p.4)

The latter may well be true, but total surprise coupled with my anger and frustration relating to the former made me blurt out to a sympathetic but stunned audience. ‘There’s unfinished business here. I’m not finished yet!’ I just mumbled something about being honoured to receive the award and that I would work harder to see that physical education was back in its rightful place. No thanks given to my family or colleagues. Emotion had taken over. I felt unworthy of the honour because the Daily Physical Education Program had ceased to be implemented in schools and the resource folders were no longer being produced. The energy generated by countless development workshops to assist teachers to deliver the ‘new age’ comprehensive program had evaporated. Physical education had all but disappeared from many primary schools throughout Australia. I felt truly undeserving and quite uncomfortable receiving accolades for an initiative that had not fulfilled its potential before draining away.

Throughout my life I have experienced the rich source of enjoyment and knowledge that comes from involvement in play, games and a myriad of physical activities. Most of my interactions with others and the understanding of the meaning of friendships have come through life experiences in which physical involvement and action have always been large components. I have always strongly believed in the importance of physically moving about in the world to learn and explore my capabilities, identities and environments (physical and social). I played with my friends in the town dump, at the beach and swimming pool, in a ‘rock band’ at concerts, local dances and generally immersed myself in a

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world full of movement. I played in a great variety of sports and learnt how to
gracefully win and lose; how to empathise with and help others; and how to respect
the efforts of everyone. I learnt how to love doing my best alone or with others. I
came to understand about universal physical laws such as speed, inertia, trajectory,
impact, diminishing returns and the ebb and flow of the tides in a very practical and
real way. It was my personal and profession mission to infuse this belief about the
value of human movement to wholesome personal development into the Daily
Physical Education Program.

My mind flashed back to 1976 when I was inspired by Professor Don Bailey's
paper outlining the enormous positive effect of devoting a third of each school day
to physical education on the children of Vanves School in the southern suburbs of
Paris. After the program had run for 10 years the French Ministry of Youth and
Sports evaluated it and concluded:

\[\text{Those taking } \frac{1}{3} \text{ of time physical education had better performances}
\text{ academically and less susceptibility to stress. Differences have}
\text{shown up markedly in intellectual development. We wouldn't conclude that those}
\text{taking up physical education are more}
\text{intelligent, but the tools of intelligence are much keener. All the}
\text{physical education pupils have fewer problems, their minds are}
\text{more open, and they receive more from their teacher. This is why}
\text{school results are better. (Bailey 1970, p.10)}\]

These were profound confirming words to me for what I had always believed to be
the valuable processes and outcomes of comprehensive physical education
programs in schools. They hardened my resolve to make it happen in Australia.
During 1977, I became involved in a small trial to replicate the Vanves experience
at Hindmarsh Primary School (Coonan 1978). It showed similar trends in benefits
to the students, although it was only over a short period of time.

In 1978 I played a more major role in a large study called the SHAPE (School
Health, Academic Performance and Exercise) Project conducted in eight primary
schools in different socioeconomic areas throughout Adelaide. This Project was
conducted over half a year and more conclusively confirmed the outcomes
observed in Vanves. It was reported to the World Health Organisation Conference
in Geneva (Hetzel 1983). In both studies I developed the activities for the program,
conducted the participating teacher development workshops and worked in the
evaluation team collecting data on the children.

There was much media interest and enormous energy generated for the initiative by
teachers and education administrators throughout Australia. I was asked to
coordinate the development of the Daily Physical Education Program for ACHPER
whilst remaining a member of the Physical Education Branch. As the word spread,
other states joined the project. In the end, more than 4000 teachers were involved
Australia-wide over seven years to develop seven folders for a progressive and
comprehensive Daily Physical Education Program. The input from practising
teachers had been my basic tenet. Their experiences and observations every day as
they trialled the materials were crucial in the formulation of the Program.

2

Toward a broader appreciation of human motion in education
Working closely with these teachers I could see the benefits firsthand. I saw happy, involved and eager children who loved school and enjoyed their classmates. They were bubbling to learn and were often reported as ‘dream’ classes by their teachers who also did physical education with them every day. They worked hard and cooperatively in all their subjects with results more than comparable to other classes. Control classes, where the physical education was more limited, confirmed this. In fact, it was very hard for these control group teachers to restrain their children as they watched the others having a great time doing things, such as dancing, obstacle courses, games and modified sports.

The teachers were buzzing with enthusiasm, to the obvious delight of the children. They saw the physical education time spent with the children as having a very strong influence on the keenness to learn and the concerned, respectful behaviour of the children. I was exhilarated by the many reports from these teachers of groups of children who barely missed a day at school. It made me proud to hear of all the children in the classes experiencing success and gaining enjoyment out of being physically involved. The Program was achieving the important goal of students experiencing real achievements that added to their sense of self-esteem and confidence. This was my dream being realised!

Parents offered unsolicited comments at school council and parent-teacher meetings relating to the influence of the daily physical education program on their children. The children were learning more from school in many ways and were displaying emotional control and greater understanding of themselves. They developed good social skills by working physically in groups, with strong interpersonal friendships evident. Harassment and bullying among the children were at a minimum and in many schools non-existent. (Today I occasionally come across some of the participating teachers and they tell me that these were genuinely their most enjoyable and effective years of teaching; others continue to do daily physical education with their classes.)

I carried my day-to-day, week-by-week and year-by-year observations of the trial classes into my writing of the rationale and outcomes for Daily Physical Education. The benefits to the children were not only that they became fitter and more coordinated, but they were keener to learn, and their self-confidence, self-esteem and interpersonal relationships all improved (Coonan, Dwyer, Worseley & Leitch 1979).

Although we could see academic performance improving among the students in the Program, evidence was not considered conclusive. It was an idea that was deemed ‘too hard and too sensitive’ to prove. Moreover, other subject groups were becoming concerned that too much time was being spent on physical education; and subjects such as New Maths, Social Studies Modules, Languages Other Than English were emerging!

On the 24th September 1982, Senator Michael Baume was joined by the Managing Director of NABISCO and the Queensland Director General of Education, Mr Clyde Gilmore, to officially launch the Daily Physical Education Program. This was during the ACHPER Biennial Conference 1982 in Brisbane, at the time of the Commonwealth Games.
I remember standing and watching with great pride as the new folders were shown around; as the teachers who had been working with the Program demonstrated their excitement and enthusiasm. I listened to the speeches of each dignitary. They spoke of fitter, healthier and more skillful children developing in the exciting new era ahead.

They did not talk, however, about enhanced learning, improved self-esteem, better interpersonal relationships and more disciplined, respectful behaviour that was apparent in the children in the trial schools. The fragmentation of the program had begun. It was being dissected and promoted in sections rather than as a whole of life and learning activity because, as I was told, 'It is easier to sell fitness and skills first. The rest will follow'.

A gnawing feeling of concern began to grow when I saw the cereal packets with iron-on transfers and small booklets. The sponsors, NABISCO, had decided to hold a competition for classes 4, 5, 6 & 7, with prizes being distributed in each state for the fastest class 1.5 km runs. The competition was advertised on the backs of the cereal packets and by ACHPER. I felt my work, and that of many others, slip away as the juggernaut rolled out its promotion and marketing spin.

From that day I have continually voiced my concerns with the promoters of the Program and pressed for the total development and learning in the child to be the major selling point for Physical Education. I must also admit that I too was guilty of being easily persuaded by the gimmicks, glitz and glamour of our marvellous work packaged up attractively for teachers and schools.

Now, some 20 years later, the Program only remains in tatters, lingering in bastardised forms, mainly as daily fitness programs (physical education) throughout Australian schools. Teachers still talk of it as the 'best PE course yet'. Others say it was, and still is, the best in the world. Friends and former colleagues say to me nowadays at any gathering that 'PE has gone backwards'; 'PE is off the agenda'; 'PE is worse than it ever was'; 'Daily PE is still the best. Can we have it re-printed?'; and 'We blew our chance to put PE right up there!'

I have reflected often about the massive dissipation of human energy and lost opportunity and it seems to me that something deeply entrenched in Australian educational and social culture was at work all the time to subvert our grand cause. Through observation and reflection, I have concluded that the root cause of the marginalisation of physical education, then and now, stems from the conceptualisation of the mind-body relationship. The way in which we perceive the relationship between the mind and the body – as mind-body split (a dualist), or as mind-body integrated (a monist) – is crucial to how we understand and practise physical education.

Toward a broader appreciation of human motion in education
Thinking of persons dualistically – partly mind, partly body, separate and distinct – immediately limits the importance and role of physical activity, of sports and games in an individual’s education. Nevertheless, the concept of a mind-body split is currently endemic throughout the education community; and this perception is what I believe to be at the core of the diminution of physical education in Australia. In addition, the operation of the ‘intellectual technique’ that de-constructs and then re-constructs the identity of physical education according to government and corporate imperatives is most destructive. Combined, these two elements have had a lethal effect on physical education.

Accepting the concept of people as integrated persons (monists) in a mind-body equipoise necessitates that physical education contribute to the learning process in a fundamental way. Moving about physically in the world is fundamental to daily living and generates a rich source of knowledge, skills, dispositions and attitudes through the acquisition of self-knowledge and personal understandings. It is inextricably connected to learning the essentials required to live a fulfilling and healthy life. Acknowledging this truth and making it more explicit in developing a broad set of beliefs and practices for educators would extract the greatest benefit from the well established notion that persons acquire understandings and learn in a great variety of ways; and that physical movement can be factored into most of them.

1.2 The study questions

A major reason for the increasing lack of emphasis on physical activity in schools has been the politics of dualism (Fitzclarence 1990; Fernandez-Balboa 1997). Through my ‘unfinished business’, revealed in the memory narrative of my professional experience, a central question and two sub-questions emerge as the basis for this study. I argue for a broader appreciation of physical education using a synthesis of research theories and examples of lived experiences of young people developing self-understandings in their daily lives. By seeking answers to fundamental questions, I propose that a clearer understanding of the causes of the diminution of physical education will enable an improved and more effective way to manage the current situation; and enable an identity metamorphosis to move the profession forward in Australian culture.

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5
Central question

What are the reasons behind the failure of physical education to sustain its identity and value in Australian society?

Sub-questions

1. How do these causes manifest themselves to compromise physical education?

2. How can the situation be better managed to increase the sustainability and broaden the paradigm for physical education?

This study argues the wisdom of an old Chinese proverb:

I hear and I forget. I see and I remember. I do and I understand.
(Confucius 1400)

Movement helps children to retain what they’ve learned. Children remember only 20% of what they hear and 30% of what they see. But children remember 90% of what they see, hear, say and do! (Landalf 2001)

Movement develops visual-spatial awareness, which is important in letter recognition and mathematical understanding. (Landalf 2001)

Because of the importance of movement we must act to move life experiences in human motion—physical education—to centre stage in educational practice.

Motion vs corporeality. In considering the findings of this study, it is important that a distinction be made between corporeality and motion in persons. The current research is not about the social construction of bodies, body image or gender constructions through bodies. Kirk argues that the body reveals cultural change and can be an active agent in change for new times in high modernity:

...the socially constructed body and physical culture in toto are of central importance to understanding the nature of new times, since the body in culture is both a surface reflecting and refracting cultural change, and an active agent in producing change. In particular, I am interested in exploring the shifting position of the body in modernity through the refracted lens of school physical education programs and assessing in light of these historical lessons possible ways forward for physical education in new times.
(Kirk 1993, p.40)
This study is concerned with what the body does as opposed to what the body looks like while reflecting or refracting cultural practices. It focuses on human motion as a component of the corporeality of a person; and builds on the physical education discourse that has occurred over the last four decades.

Issues that the current study complements include the body in schooling and culture (Kirk 1993); the reification of the human body through physical education (Broekhoff 1972); the postmodern body and education (McLaren 1988; Seymour 1995); the body and feminist theory (Rothfield 1986; Wright 1996; 1999; 2000); embodiment of gender (Whitson 1994); gender and physical activity (Gilroy 1989); the body as machine (Prunger 1995); and body focus in education and physical education (Armour 1999; Tinning 1998). In particular, the study seeks to complement and elaborate on the issue of the embodied learner in terms of pedagogical practices and the content of learning (Prain & Hickey 1998).

In so considering all these issues, the study examines the functional processes in the operating person existing in the ‘options generation’ that is not characterised by certainty of employment and career-long pathways.

**The ‘Options’ Generation.** Youth in particular encounter a rich variety of options that is constantly changing. New times require that physical education be relevant in the education of youth, otherwise it will be marginalised further still in future programs of educational institutions. The South Australian Curriculum Standards and Accountability (SACSA) Framework promulgated in 2001 by South Australia’s Department of Education, Training and Employment (DETE) identifies *essential learnings* that need to be acquired by students to cope with these new times as understandings, capabilities and dispositions; that is, personal and intellectual qualities – not bodies of knowledge – that develop throughout an individual’s life.

The challenge is to develop personal resources and flexibility to be able to take advantage of what is on offer, to possess the capabilities to apply knowledge, skills and experiences to new and different contexts and situations, and to be able to act responsibly with regard to others. Amidst diversity and opportunity, the challenge for educators is to facilitate the systematic learning of these capabilities. (Department of Education, Training and Employment 2001, p.12)
An examination of the inherent value of human motion as perceived by persons acting to acquire these essential learnings provides an insight into the way the paradigm can be broadened for physical education. The study seeks to expose the fundamental elements of persons existing as monists and illuminate how they can acquire these essential learnings through integrated experiences involving human motion in educational programs for new times.

1.3 The construction of the thesis

The organisation of this thesis corresponds to my analysis of the contrast between viewing persons as mind-body integrated (monists) rather than separated (dualists), and the effect this has on the conceptualisation and practice of physical education for new times.

In this chapter I have written a memory from my professional life experiences as an Australian physical educator. The memory sweeps across and draws in other memories relating to my formative years and the influence they had on the way I view and value physical education. The memory unfolds why I am motivated to overcome difficulties constantly challenging the identity of the profession.

The inquiry’s central and sub-questions focus the research toward revealing the causes of the problems, how their destructive influences manifest, and then to make a turn to identify ways to better manage the situation for a more sustainable and effective professional identity. In Chapter 2, I discuss what I argue are the problems with physical education. I synthesise a wide range of information from the field to reveal the changing identity of physical education and highlight the need to probe the causes for analysis to enable subsequent better management in Australian education programs. In Chapter 3, I describe the sources of strong forces from the modern era ideologies that have dichotomised the mind and body and fragmented people and the field. I draw on literature to demonstrate the futility of mind-body dualism beliefs and practices in physical education. Within this context, I unveil the divisive and powerful forces created by the ‘intellectual technique’.
In Chapter 4 evidence drawn from cognitive science through emerging research, positive psychology and neuroscience provides a strong rebuttal of the notion that humans live a mind-body separated existence. Possibilities arise for a new appreciation of physical education from the fresh conceptualisation of the embodiment of reason. The research process is described in Chapter 5 in which I describe my strategy of drawing on written narratives of self-defining memories from participating students to observe the way they reason and acquire essential learnings and self-understanding in their daily living. In this chapter I describe how I will present the voices of the young people to illuminate the presence of key operations as they function as integrated or disintegrated persons in contexts exhibiting conflated or disjointed knowledge and practices.

In Chapter 6 I illuminate the presence of the important functions of motion, emotion and reasoning as I scrutinise the written narratives of the memories from the students about an important event in their life. In Chapter 7, the focus is on applying the collective research information to examine the exciting possibilities for physical education in new times. Globally-emerging education strategies are examined to understand more clearly the role of human motion in valued learning processes.

To conclude the thesis, I draw upon the questions, arguments and empirical evidence gathered to make explicit the value of the contribution of this new knowledge to the profession. I conclude that the drive to develop a clearer and more established theory relating the contribution of human motion to learning will enable better management and enhanced identity representation for the profession to be acknowledged and valued in the experiences provided in Australian educational institutions.

I have reviewed the literature across several disciplines to formulate this study in an attempt to view the complex sociocultural issue of the loss of identity for physical education in Australian culture. By exposing a major cause of the problem, this study presents an analysis of issues of significance to education: the need to conceptualise the person being physically educated as a monist and the need to conflate the discipline to metamorphose into a stronger identity.

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This study also contributes a conceptual framework within which to examine the means by which young people acquire essential learnings through holistic methodologies that include as much human motion as possible in order to broaden and make flexible their life options. The research provides the basis for improved argument and the acknowledgment that human motion has inherent value and should be fully utilised in the developing lives of young persons. The study investigates and confirms the involvement of human motion in the integrated developmental process in which we come to know about ourselves in our 'world of being'.

We are our bodies, and only in and through them do we come to know ourselves and our relationship to others. (Caddick 1986, p.76)
The meaning of physical education

What has happened? How did this situation arise? Their are two conceivable answers: one is that competitor subjects have come up with better arguments and can justify their existence more convincingly. If this is the case, Physical Education's demotion from the 'Champions' League' of established subjects would be justified. The other is that there are indeed good reasons to justify Physical Education, but the subject has not presented them convincingly enough to persuade the responsible politicians and decision-makers of its indispensability. There are many indications that the latter is the case. (Brettschneider 1999, p.77)

This chapter focuses on physical education as the major representation of human motion in school curricula. In particular, it will illuminate the continual struggle experienced by the physical education learning area to be valued and acknowledged over the last 20 years. It reveals the widespread lack of understanding of the concept of physical education, even among its practitioners.

At its core, physical education is a subject devoted to human movement and physical activity beyond the bounds of games and sports, and into the realm of physical and mental health, well-being, self-confidence, self-expression and self-esteem. It encourages the acquisition of self-knowledge and understanding as personal resources for learning and life. And, as Light argues:

Physical educators have much to gain from highlighting the potential for promoting a form of cognitive learning that is tied into social and physical development and which occurs through movement.(Light 2002, p.23)

In the context of this study, physical education is synonymous with human motion and the resultant cognitive, social and physical development that springs from it.

2.1 The diminution of physical education in Australia 1980 - 2001

In the closing months of 1977, a delegation from the South Australian Branch of ACHPER sought an audience with the Minister of Education, Dr Hopgood, to express their concerns and put forward views relating to the teaching and status of physical education in schools. Their position was clear: schools required many more
specialist teachers if the quantity and quality of physical education were to be improved to a level commensurate with other core subjects in the curriculum (Mutton 1981).

Although the Minister was sympathetic to the views expressed by the delegation, he was not convinced that they were a true reflection of the state of physical education in South Australia. Consequently, he proposed that any attempt to increase either the number of specialist teachers of physical education or the amount of time devoted to physical education in primary and secondary schools would have to be based on substantiated information. He assured the delegation of his concern by supporting an inquiry into the state of physical education and sport in South Australian schools.

Data were gathered by distributing questionnaires to a large number of schools and inviting submissions from individuals and organisations in South Australia, interstate and overseas. These investigations took three years, with statistical data about physical education and sport during 1978 and 1979 also incorporated into the report.

The report concluded:

No less than any other aspect of education, physical education is concerned with the development and needs of the individual child. Vague notions of playing games and sports are no longer adequate attitudes toward physical education. Physical education must be provided on a daily basis to achieve its desired outcomes. (Mutton 1981, p.13)

This inquiry paralleled the development of the Daily Physical Education Program that was subsequently launched in 1982 as described earlier. The then Director General of Education, John Stienle, wrote in the introduction to the Program:

The growing community concern for the health and well-being of children has been an important consideration in the development of daily physical education. Many parents, medical practitioners and teachers strongly believe that a sound physical education is the right of every child. This view was supported by the 20th session of UNESCO in Paris, 1978. [Education Department of South Australia, 1982, p.v; now the Department of Education and Children’s Services (DECS)]
2.1.1 The failure to maintain momentum

In 1984, however, at the height of the excitement for daily physical education, Peter Moody of the University of British Columbia presented a prophetic warning to the thousands of enthusiastic teachers throughout Australia:

The title for this editorial [Current status and future direction of physical activity programs in the United States, with implications for program revisions], is taken from Dr. Vern Seefeldt’s keynote address to the 15th ACHPER National Biennial Conference held recently in Sydney. Although Seefeldt’s presentation was a comment on the current status of Physical Education Programs in the United States, it is my perception that his description quite aptly sums up the situation in both Canada and Britain. The fact that Australia is presently excluded from this list is a cause for rejoicing, but not one for complacent satisfaction. (Moody 1984, p.2)

Little did Moody know that within six short years Australian physical education would be plunged into ‘crisis’ with school programs reduced and university programs cut back drastically. After the initial euphoria and optimism that accompanied the introduction of the Daily Physical Education Program, progress into the 1990s had stalled. In May 1992, the Senate referred to the Standing Committee on Environment, Recreation and the Arts an inquiry into physical and sport education throughout Australia.

The inquiry was generated after strong representations from various professional and sporting association groups that were most concerned at the state of affairs throughout the nation. The overarching terms of reference were: to consider ‘the importance of physical and sport education to the lifelong health and personal development of the individual’. The following pointed comments made in the report provide further insight into the context of this current study.

This report examines the confusion about what constitutes physical education, desirable outcomes from a physical education program, the apparent lack of policies for physical education, the resources allocated to physical education, concerns about teacher training in education, and the impact these factors have had, and are having, on the fitness, physical skill development and participation of Australian school children. (Senate Standing Committee on Environment, Recreation and the Arts 1992, p.iv)
One response to the concern about the state of physical education was the National Statements and Profiles, promulgated in 1994 with the inclusion of Health and Physical Education as one of eight prescribed areas of learning for students. Worthy of note is that the Statements and Profiles were the first curriculum documents to couple the learning area of health with the learning area of physical education. The conflation of these two areas of study has contributed to the uncertain meaning of the concept of physical education and diluted the focus on human motion inherent in the term PE.

The Statements and Profiles have, therefore, had limited influence on the standing and practice of physical education in Australian schools (Tinning 1998). An investigation of South Australian public schools’ response to the Department of Education, Training and Employment (DETE) recommendation that all state school students be provided a weekly minimum of 100 minutes of physical education and sport during the compulsory years of schooling produced the following outcome, for example:

> Overall, the evidence emanating from this research suggests that, to this point in time, The Department of Education, Training and Employment has not successfully achieved the recommendation that a weekly minimum of 100 minutes of Physical Education and Sport be provided for all state school children during their compulsory years of schooling. (Brown 1999, p.v)

Concern Australia-wide for the reduced status and practice of physical education prompted ACHPER National to produce an Advocacy Kit. In the opening remarks the National President, Alf Colvin, pointed to the aim of the kit being designed:

> ...to assist educators, parents and community workers who are continually called upon to argue the case for the Health and Physical Education key learning area which includes sport, dance and recreation. (Australian Council for Health, Physical Education and Recreation 1998, p.1)

### 2.1.2 Reasons for failure

The lack of success in re-establishing physical education is repeatedly attributed to a wide range of issues facing schools and state instrumentalities. Among them are the social context in which modern Australian children live. Sedentary pursuits such as
computer games are increasingly popular, and there are significant age and gender imbalances in the education workforce that impact on role modelling, energy, experience and new ideas. Furthermore, there are differences in student gendered participation, country school limitations, low support for teachers at the school level, timetabling issues of an ad hoc or semester nature, large class sizes, a crowded curriculum, lack of teacher expertise, few opportunities for professional development and lack of facilities and equipment.

Many of these issues have been with physical education for at least the last 50 years and the recurring themes create questions as to why they have never been properly addressed or resolved. The current study argues that these issues are symptoms, not causes and result from entrenched attitudes and preconceptions that are at the core of the struggle to maintain the identity and value of physical education in Australian education.

Again, arising from the findings of the Senate Inquiry in relation to these issues in Australia, Senator Rosemary Crowley pointedly commented when giving the thirteenth Fritz Duras Memorial Lecture:

> While all these reasons have some validity perhaps the confusion between PE and sport is the principal one. Schools have been able to remove or reduce PE from their curriculum and at the same time adopt the AUSSIE SPORTS program. There is no doubt that the AUSSIE SPORTS program with its emphasis on modified rules and wide participation is an excellent program. Indeed, it is a proper part of a PE program but it is no replacement. Many schools have assuaged their consciences for removing PE by adopting AUSSIE SPORTS. As I have said, it's good but not good enough! (Crowley 1993, p.23)

This statement highlights the fundamental problem of the fragmentation of physical education into 'bits' that develop parts of the total, but end up being perceived and practised as the total.

Interestingly, the AUSSIE SPORTS program is now defunct, leaving many of its strong supporters to either look around for similar alternative approaches or, more commonly, to cease teaching any form of physical education at all out of frustration.
2.2 The deepening crisis for physical education

As part of the effort to guarantee the place of physical education in Australian educational curricula, in January of 1991, eminent physical educators from across the nation met on the Geelong Campus of Deakin University to discuss the state of physical education in Australian schools and tertiary institutions. The conference was called ‘PE in Crisis’. Presenters provided numerous perspectives on what were commonly understood to be problems within the profession. In most instances the papers were descriptive and very few attempted to uncover the deeper causes of the decline of physical education. Ten years of ample evidence indicates that the crisis has not been resolved; indeed it is much deeper. This current study reveals the status of physical education has worsened considerably during the intervening decade since the ‘PE in Crisis’ conference.

2.2.1 A vital subject adopts a defensive position

On November 3-5, 1999 a world summit on physical education was held in Berlin with 250 representatives from over 80 nations. Although great diversity existed among the participants, there was unanimous agreement on two fundamental issues:

- Physical education is a right for all children and a fundamental component of their development and education.

- Strategies and actions are needed to ensure that quality physical education is implemented and supported world-wide.

At that summit a worldwide Survey on the State and Status of Physical Education in Schools was presented and discussed to identify possible actions on the national and global level. In addressing the survey, Hardman commented that despite broad-scale international scientific evidence on the value of physical activity that provides a prima facie case for regular physical activity, physical education in schools appeared to be in a perilous position and was under threat in all regions of the world.

Alarminly, two decades on from the 1978 UNESCO Charter for Physical Education and Sport, which espoused the principle of physical education as a basic human right, some national governments have proposed, and are proposing, either removal of physical education from the curriculum or reduced curriculum time allocation. (Hardman 1999, p.15)

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In elaborating further the findings of the survey that dealt with physical education curriculum requirement, subject status of physical education, curriculum time allocation, resources, equity issues, and issues and trends in physical education Hardman concluded:

Arguably, physical education has been pushed into a defensive position. It is suffering from decreasing curriculum time allocation, budgetary controls with inadequate financial, material and personnel resources, has low subject status and esteem, and is being ever more marginalised and undervalued by authorities. At best, it seems to occupy a tenuous place in the school curriculum: in many countries it is not accepted on par with seemingly superior academic subjects concerned with developing a child’s intellect. (Hardman 1999, p.32)

2.2.2 A lesser subject

The view of physical education as a subject of less worth than others is persistent in the history of education in Australia, and leads to educators making decisions based on this perceived low status to demand that the subject justify its place in the curricula of educational institutions.

At the 2002 Curriculum Corporation Conference, New Radicalism: Making Education Priority, Bruce Wilson CEO called for a shift in education policy to facilitate all students gaining ‘deep understanding’ and purported that the current curriculum level policy in Australia does not contribute to the achievement of that goal in students. He stated that in his view the education policy and practice of the Australian states collectively prevents the attainment of that goal.

Among his arguments for a change to facilitate students achieving ‘deep understanding’ was that the eight key learning areas – English, Mathematics, Science, Technology, Languages other than English, Health and Physical Education, Studies of Society and Environment, and the Arts as set out by the Curriculum Corporation in 1994 – actually act as an obstruction to improvement in learning for students. He proposed that, with regards to deep learning, the attempt to give equal weight to all eight areas of learning weakened the focus of the students on what he described as the core disciplines:
But some KLAs are more important than others. If I say that Health and PE and the Arts are less important than S0SE and Technology, that more time should be spent on the latter, and that HPE and the Arts should only be studied in a limited way at a few points in schooling, I would probably have my throat torn out by disgruntled teachers in the areas I choose to regard as of less importance.

But we need to recall that the eight KLAs are not tablets handed down by God, each of an equal size. They are an outcome of a political and intellectual accommodation reached by Ministers and others as a way of moving forward from a position of difference. They have no conceptual rigour, apart from those based directly on a single, well-established discipline. We should regard them as a convenience, to be manipulated according to our educational priorities. If they no longer add value, they should be abandoned. (Wilson 2002, p.4)

Clearly, strong cultural values and beliefs emerge as the drivers of this intellectual quest at the expense of acquiring essential learnings and understandings of self-knowledge, a positive individual and group identity, positive and effective interpersonal relationships, personal and community health and wellness. The approach espoused by Wilson and others forfeits the rich, relevant and meaningful knowledge derived from human motion because physical education becomes marginalised from the 'core' learning process.

The separation of core, and superior, subjects from those identified as inferior or less required needs to be challenged. Wilson's proposition foregrounds the need to make more explicit the inherent value of human motion in acquiring the essentials to survive and be successful in a rapidly changing world.

2.3 The need for more meaningful ‘physical education’

Recently the 12th Commonwealth International Sport Conference held in Manchester, United Kingdom, provided evidence that the crisis in physical education continues to be a centre of attention, with world leaders espousing an urgent need to take action to address the current situation:

The research evidence I am most familiar with, from Australia, Britain and USA, shows clearly that the traditional forms of school physical education that currently dominate programs in these countries consistently fail to provide many young people with opportunities for significant and valuable learning. Worse than this, they are actually convincing these young people
that a physically active lifestyle is not for them. The crisis is not that we
don't have enough of this kind of physical education. Along with van
Deventer, I propose that we need to create new, quality forms of physical
education. The task for a global alliance of physical education organisations
is to address the crisis in physical education at this level first of all. We
need to put our house in order, using the research and scholarly skills as
well as the craft knowledge available to us. (Kirk 2002, p.30)

In 2002, world leaders in physical education were still talking about the crisis in their
professional field. It is apparent that the discussions have not always been focussed
on the root causes of the crisis. As Kirk intimates, only when a comprehensive theory
about human motion and its value to the developing person is clearly understood, can
the situation begin to be managed well in order to move the profession forward with
purpose and relevance to develop in a strong and educationally sustainable way. It is
the purpose of this study to contribute to the task of building such a theory.

It is not as if some educators had not perceived aspects of this fundamental problem.
During the early 1980s a handful of astute leaders in the field had begun to analyse
the perception of the original ideals of daily physical education and their transmission
into practice in Australian schools. Richard Tinning reviewed the progress of the
daily physical education initiative during 1987 and concluded:

So I have a mixed vision of the state of Australian primary school physical
education as we approach the 1990s.

....Whether or not physical education in our primary schools gets better will
depend on the extent to which what stands for physical education (as an
educative experience for each child) is seriously challenged, and
improvement in quality becomes the major issue. Daily physical education
has had its honeymoon in Australia and considerable effort needs to be
made to keep the relationship between physical education and schools
worth maintaining. (Tinning 1987, p.38)

Earlier, during 1985, Kirk had conducted a project in Queensland schools to study
how daily physical education was being taught and how the program materials were
being used. Based on his observations, he concluded that in addition to the argument
expressed by Tinning earlier, there was need for a greater balance in the program
offerings to recognise the knowledge that students can learn from well-organised and
structured physical education experiences:
There needs to be a shift in thinking about physical education in primary schools away from the limiting and conceptually inadequate notions of 'fitness' and 'skills', and to begin to think of physical education as a field of practical knowledge. (Kirk, cited in Tinning 1991, p.62)

Four years later, Kirk critiqued the research basis of the Daily Physical Education Program and concurred with Tinning that the honeymoon was over for the movement and that a re-think of the basic philosophy was required:

It will require a rethink of the extent to which the "physical" in physical education can be linked to fitness, the possibility of creating programs in both primary and secondary schools that treat both the physical and the cerebral together, and of the role the physical educator should properly play in health education. (Kirk 1991, pp.75 & 76)

The constant monitoring of the state of physical education by these leaders in the field kept questioning the theoretical basis and practice of physical education in educational institutions, where its identity had been diminished. In the schools, physical education was gradually disappearing from the curriculum while in universities, degrees of 'sports science' and 'human movement' were replacing those in physical education, with teacher education programs almost eradicated.

Unfortunately, these leaders did not probe deeper into the underlying causes of this on-going and longstanding 'crisis'. Their constant vigilance now requires an active response. That is an important intended outcome of this current study.

2.4 A constant shifting of identity

The debate over what physical education is, should or could be has been going on for 70 years. The constant shifting of the meaning of physical education, the search for identity, is a symptom of the malaise that afflicts this learning area.

2.4.1 In the beginning

Philosophies derived from England set the trends and developments in the field of physical education during the early part of the 20th century. The Education Board of Great Britain's 1933 Syllabus of Physical Training for Schools clearly indicated the intended interpretation of physical education in schools.
According to Billborough and Jones, the Syllabus provided a solid foundation for comprehensive interpretation in the education of all students, but the intent was not always implemented thoroughly in educational institutions:

Physical education includes all activities likely to minister to physical health, not only gymnastics, games, swimming and dancing, but sports, free play, walking tours, school journeys, camps and all forms of occupation and exercise likely to create a love of the open air and healthy way of living. Physical training given at, or in connection with the school, is only a part, though a very important part of the whole subject. (Billborough & Jones 1973, p.21)

The all-encompassing and comprehensive conceptualisation of physical education contributing to the general education programs in schools and other educational institutions was the vision of these early physical educators. Theirs was a mission to blend physical (human motion) into the educational experiences for holistic development of individual students:

The presentation of any physical activity in the school situation should be assessed by two criteria, the physical and the education. The two must go hand-in-hand and neither should suffer by over-emphasis on one. The aims should be:

- to contribute to the general education of the individual through physical activity;
- to educate individuals physically, by developing their physical ability, adaptability and versatility in as wide and all-embracing a way as possible;
- to present physical activities in ways which are based on sound educational principles.

...When the drill or PT, or PE lesson has been so modified and developed that the educational requirements already briefly outlined have been satisfied it is appropriate to refer to the lesson as educational gymnastics and to regard it as a valuable and indeed an essential aspect of a comprehensive physical education program. (Billborough & Jones 1973, p.23)

2.4.2 The fragmenting of meaning

The debate over what physical education currently stands for has been ongoing since the early 1960s with the rapid development of specialisations to satisfy the need for more information regarding human physical activity. According to Bouchard (1992), while the term physical education is adequate to describe the current activities of professionals who provide instruction and activity programs in the context of the
school systems, it needs upgrading to accommodate all of the professionals contributing to the field of human physical activity sciences throughout the community.

The current malaise regarding the nature and purpose of physical education is the result of an intellectualising about human physical activity to the point where the fragmentation in the field is so rife as to make an all encompassing representation seem impossible for the profession:

Since the 1970s, however, scholars in other disciplines, from molecular biology to sociology, have initiated research on problems related to sport and other physical activities. In addition, practitioners have initiated applied research to address practical issues they encounter in their professions. The conceptual difficulty of organising such a wide range of approaches and concerns into a single entity has resulted in increasing discomfort for a growing number of physical activity science professionals and students. In particular, we need to define more clearly our mission, our responsibilities, and our research agenda. (Bouchard 1992, p.3)

It is against this background of forces from within and without the profession, that the identity of physical education has been manipulated by government instrumentalities to represent concerns currently in vogue and often implemented through educational institutions. Tracking the changing identity of physical education over the last 70 years in Australia and overseas highlights the manipulation of the understanding of the role of human motion in society and particularly education according to the needs and imperatives of political and research groups. The resultant chameleon identity of physical education has been devastating for the sustainability of the profession.

Physical education as an aspect of health and leisure. Since the Second World War, changes in all aspects of society and around the globe have proceeded at an accelerating rate. These have taxed the intelligence, inventiveness, initiative, imagination, ingenuity, originality, enterprise and creative ability of its citizens and challenged their ability to apply knowledge, skills and experience to a variety of demanding situations. It is no surprise that education programs are expected to flexibly adapt to meet needs emerging from such dynamic social, technological, medical, commercial, industrial and domestic changes.
Caught up in this rapidly changing dynamic, intellectualising about human motion has been powerfully influenced by a politics that has marginalised it from education to an imperative concerned about the health status of Australians and the development of physical skills conducive to the constructive use of leisure time (Education Department of South Australia 1981a).

Physical education as an holistic discipline. The development and implementation of the Daily Physical Education Program was one of the most significant education initiatives during the late 1970s. It gained national recognition and was used by tens of thousands of teachers in many schools throughout Australia. The identity of physical education was represented at this time as:

...daily involvement in vigorous physical activities can result in improved physical fitness and health, increased social awareness and improved academic performance for many of those who participate in such a program.

Children when given frequent opportunities to explore the use of their bodies and to become successful in movement, benefit in terms of increased self-confidence, the acquisition of social and physical skills, and the development of positive attitudes about physical activity. A child's learning potential can be enhanced as a result of improved fitness and health. (Education Department of South Australia 1981b)

This description parallels that posited by the early English physical educators. The notion of holistic education for students provides the benchmark against which the swirling, changing identity of physical education can be observed since 1980.

The seeds of destruction. The formation of the identity of daily physical education provides an important starting point to illuminate the sources of forces working against the greater sustainability of the curriculum area. The Daily Physical Education Program was written, trialed and rewritten over a period of two years. It involved thousands of classroom and specialist teachers in many school throughout Australia.

It was not the intellectualisation of a few bureaucrats or academics, but the input of many practising teachers that brought it to fruition.

As the National Coordinator of the Daily Physical Education Program, I was able to facilitate a groundswell of enthusiastic students, parents and teachers working toward the comprehensive development of holistic physical education. The then Director-
General of Education, J.R. Steinle claimed in the Daily Physical Education Program Organisation Handbook:

The project leading to the introduction of daily physical education in South Australian primary schools began in 1977. This rapid spread through the primary schools in 18 months was possible because of the acceptance of the program by enthusiastic parents, teachers and children who have been guided and supported through the carefully planned development and implementation of the program by the Physical Education Branch and regional physical education advisers. (Education Department of South Australia 1982, Foreword)

From the outset, however, the program was promoted with a 'spin' toward the imperatives of government agencies, the professional body (ACHPER) and the sponsors (Nabisco), thus containing the seeds of its own destruction. The identity of the Program became one of promoting healthy, fit Australians who would be able to participate in a wide range of games and sports through the acquisition of skills. Included in the promotion was the eating of healthy breakfast food as part of healthy behaviours.

The departure from the learning of skills, attitudes, knowledge and dispositions for general education and development was one of the most significant decrements in the portrayal of the Program by those involved in its launch and subsequent promotion. This narrow emphasis and promotion formed the basis of the feeling of disappointment among many in the Program's development team, concerned about the lack of wider understanding of what the Program was actually all about.

The Daily Physical Education Program was well developed and well presented for Australian teachers, but with the emphasis on only a small part of what daily physical education ideally represented, it soon disintegrated, like other physical education programs before it. Its implementation as a 'skills and fitness program' lasted only eight years. The decline in the level and quality of programs in schools invoked widespread concerns about the profession and led to the previously discussed 'crisis in physical education'. The Senate Inquiry into Physical Education and Sport Throughout Australia, as previously described, alluded to the issue of an unclear identity for the profession that needs reiteration.
2.4.3 Attempting (yet again) to define physical education: National Statements and Profiles

In 1994 the previously mentioned set of National Statements and Profiles was released to education communities throughout all Australian states and territories. They represented one of the most significant collaborative curriculum development projects in the history of Australian education. Eight learning areas were described to provide a framework for curriculum development by education systems and schools (Curriculum Corporation 1994). The areas, as previously pointed out, were English, Mathematics, Science, Technology, Languages other than English, Health and Physical Education, Studies of Society and Environment, and the Arts.

The National Statements and Profiles were the first significant development to formally join physical education with health education in an intellectualisation that highlighted a more theoretical emphasis about health issues and a lessening use of physical activity in the construct of programs for the students.

In particular, the learning area was concerned with growth and development, fundamental movement patterns and coordinated actions of the body, the concept of fitness from a biological and cultural viewpoint, physical activity – its promotion and factors affecting participation – effective relationships, identity formation, safety for health promoting and protective behaviours, challenge and risk, and the role of food in healthy living.

The learning area included a study of the multi-dimensional nature of health and how it is linked to personal behaviour and the social, biological and physical environments. It invited home and school links in acknowledgment of the diverse influences on students’ concepts of well-being, including cultural differences and family practices to enhance the school programs through encouraging parent and caregiver support.

The identity of physical education when melded with health education was portrayed in the National Statements and Profiles as follows:
Studies in the health and physical education area focus on the significance of personal decisions and behaviours and community structures and practices in promoting health and physical activity.

The area emphasises the relationships in a field of influence that includes personal actions, the beliefs, attitudes and values held by families, cultural groups and the wider community, public policies affecting health and physical activity, and the settings and contexts of activities in the area.

An understanding of the beliefs, practices and policies in the area of health and physical education allows people to play an informed part in public debate and to take the individual and collective action necessary for emotional, mental, physical, social and spiritual wellbeing, both personal and social. (Curriculum Corporation 1994, p.2)

The blending of physical education with health further fractured physical education. A survey in 1999 by Brown indicated that physical education professionals were unhappy with the welding of the subject areas. They observed that health education theorisations had swamped physical education and little physical activity remained.

2.4.4 More definitions: State interpretations of the National Statements and Profiles

Each Australian state agreed to implement the National Statements and Profiles, but soon became involved in developing their own interpretation of them. Sourced from the ACHPER Advocacy Kit (2000), it is apparent that parochial intellectualising by each state has spawned the creation of varying curriculum frameworks based on the tenets of the original but driven by respective state government imperatives. The date of introduction and the state’s or territory’s application of the Statements and Profiles follows below.

Northern Territory, 1994. In Northern Territory schools, health and physical education are taught as one of the eight key learning areas for the mandatory years of schooling from Transition to Year 10. Physical education in the primary and junior secondary years of schooling is in the form of the traditional topics of aquatics, dance, fitness, games/sports, gymnastics, outdoor education and track and field.

Health education is taught separately and utilises the five strands of the National Profile for study in Human Development, People and Food, Health of Individuals and Populations, Human Relations and Safety. At the senior secondary level, health education is developed through two sequential units of work covering Development, Relationships and Sexuality, Lifestyle and Environment and Drug Education and Life Skills.
At the senior secondary level, students may select from a range of Stage 1 courses including Physical Education, Physical Recreation Studies, Sports Coaching and Administration, Socio-cultural Aspects of Sport, Equality in Sport, Sport and Performance, Outdoor Education, Outdoor Pursuits, Personal and Social Health and Community and Environmental Health. At stage 2 only Health education, Physical Education and Outdoor Education are utilised.

The ACT, 1995. In Australian Capital Territory government schools health and physical education courses apply from Kindergarten to Year 10 within the Territory's own framework, adopted with slight variations and using outcomes identical to the National Profiles.

Victoria, 1995. From the National Statements and Profiles Victoria has developed two curriculum frameworks that describe the broad content, skills and learning outcomes appropriate for students in the health and physical education learning area. These are the Curriculum and Standards Framework (CSF): Health and Physical Education – Years P-10, and the Victorian Certificate of Education (VCE) Years 11-12.

The HPE KLA CSF promotes the development of understanding of as many topics as possible in the students including fundamental movement patterns and coordinated body patterns, the concept of fitness, physical activity, growth and development, effective relationships, identity, safety, challenge and risk, food and nutrition and health.

Tasmania, 1996. After the release of the National Statements and Profiles Tasmania commenced work on developing its own Health and Physical Education Core Curriculum (K-10) based on the health and well-being needs of young people. In brief, it intertwined the health and physical education learning area and the broader health promoting school philosophy. It was agreed that the ‘topic approach’ that characterised the learning area be replaced by an holistic approach to planning and delivery.
The curriculum development work concluded that the common objectives of all Tasmanian health and physical education programs should be the development of five Key Intentions that are the states of being that all exiting students should have achieved as a result of their learning through the curriculum. These Intentions were Responsibility, Identity, Relationships, Active Participation and Well-being. It is made very clear by the curriculum statement that the new directions provided by the Intentions would only be successful when teachers put the needs of the students ahead of their subject.

**New South Wales, 1997.** Health and physical education in New South Wales is taught as a key part of the learning area Personal Development, Health and Physical Education (PDHPE) and is mandatory from Kindergarten to Year 10. PDHPE is one of six mandated learning areas in the primary school curriculum while it is one of eight in the secondary school curriculum. At the Year 11-12 level, PDHPE may be studied through Life Management Studies and three other courses are available for students to study that include: Sport, Lifestyle and Recreation Studies; Exploring Early Childhood and Skills for Living. It is also mandatory for senior students in the government schools to complete a Personal Development and Health course.

The key learning area of PDHPE is described by the study of content areas such as:

- growth and development
- fitness and lifestyle
- interpersonal relationships
- personal awareness
- safe living
- personal choice
- movement sense
- movement skill
- movement composition
- health promotion
- road safety
- child protection
- drug education
- HIV/AIDS education.
Queensland, 1998. Queensland's new health and physical education curriculum derives from the National Health and Physical Education Statements and Profiles and enables each student to enhance their physical development, develop movement skills, promote personal and community health and contribute to their cognitive, personal and social development.

In this state, the health and physical education curriculum is concerned with the inter-relationship of concepts relating to growth and development, fundamental movement patterns and coordinated actions of the body, physical activity, effective relationships, identity, challenge, risk and safety, the role of food and the multi-dimensional nature of health. The concepts are distinctive to the health and physical education curriculum and are considered part of the essential learnings for a comprehensive education for all students in Queensland schools.

Students in senior secondary schools can elect to study a Health Education and or Physical Education syllabus approved by the Board of Senior Secondary School Studies.

Western Australia, 1998. The Education Department of Western Australia Student Outcome Statements (SOS) have been developed through a rigorous process stemming back to the National Statements and Profiles. The major strands developed are Skills for Physical Activity, Interpersonal Skills, Self-Management Skills and Concepts for a Healthy Lifestyle. Attitudes and values are embedded across the learning area, described as a major outcome in the Learning Area Statement.

South Australia, 2001. Health and Physical Education is one of the eight learning areas of the South Australian Curriculum Standards and Accountability (SACSA) Framework. South Australia was the last to develop a framework after experiencing difficulties with the conceptualisation and implementation of the National Statements and Profiles. The SACSA organising body felt that there were too many strands and outcomes in the Statements and Profiles, that the curriculum framework was too complex. They observed that there was teacher dissatisfaction with the poor linkage between the Statements and the Profiles, that the assessment and standards were not well defined, and, in the case of the health and physical education, there was a lack of physical activity.
The SACSA Framework is based on the principle that all children and students should have access to common core curriculum entitlement. It is the only one in Australia that spans birth to Year 12 and supports continuity in learning and the transition of learners across the years of schooling, between education sites, services and groupings.

The learning area is described through only three strands that are developed progressively across the bands of schooling and include Physical Activity and Participation, Personal and Social Development and Health of Individuals and Communities. The strands are interrelated and are to be developed concurrently as they inform each other and the other learning areas in the total school program.

At the time of the development of the SACSA Framework, there was great concern from the health and physical education professional associations in the state that neither health nor physical education were appropriately represented in the National Statements and Profiles. Expert committees were set up to increase the representation of physical activity in the curriculum (sport felt that scant attention was given to it), and address contemporary issues of food choices, drugs, safe behaviours.

As the principal writer for health and physical education during the construction of the Framework, I gained a telling insight into the difficulty physical education had in sustaining its identity amid powerful forces that encouraged the compartmentalisation of persons and bodies of knowledge. Government imperatives to attend to issues of high-risk behaviours in relation to health such as drugs, alcohol and tobacco and affirmative action to skew learning toward enterprise and vocations were one set of persuasive forces. Other powerful forces included Aboriginal and Torres Strait Islander people’s perspectives, multicultural perspectives, gender perspectives, socioeconomic perspectives, disability perspectives and rural and isolated perspectives.

However, the most powerful influences on the construct of the health and physical education learning area came from the requirement to build capacities for successfully living with, and influencing change in, the twenty-first century. Five Essential Learnings were explicitly identified which, together with concepts and
processes drawn from the eight key learning areas, provided the connecting threads for the whole curriculum. These Essential Learnings were identified as Futures, Identity, Interdependence, Thinking and Communication; and it was intended that the eight key learning areas would contribute in their own unique ways to the acquisition of the essential learnings. Understandings, capabilities and dispositions developed through the eight key learning areas were considered to form an integral part of children’s and students’ learning from birth to Year 12.

They were described as resources to be drawn upon throughout life to enable people to productively engage with changing times as thoughtful, active, responsive and committed local, national and global citizens.

The emergence of the Essential Learnings has provided a ‘window’ to a monumental opportunity for physical education to move to centre stage in education by finally taking on the whole-of-person meaning envisaged in the 1933 Syllabus of Physical Training for Schools. It is a point of entry for human motion into the process of learning that has not been fully understood nor thoroughly developed. It provides great hope for the sustainability of the profession. This important issue responds to the second sub-question – How can the situation be better managed to increase the sustainability and broaden the paradigm for physical education – and will be more completely developed in Chapter 5 as a strong and positive way forward for the profession.

2.5 Summary of the problem

From this brief outline of the shifting representations of physical education across time and across Australia, it can be seen that physical education exists in a climate of defensiveness and continual justification, as illustrated by the assertions of Wilson. The changing identity exhibited between the Australian states only serves to reinforce the vulnerability of the profession and weaken attempts to move movement education closer to the core of education (Dodd 2000).

The fragmentation exists in a wider perspective as well. In a recent appraisal of Australian state education systems and independent sectors, and those of other
countries such as England and New Zealand, it was reported that there was large variation in the attainment of world class education using internationally derived benchmarks (Kerr 2000). Although Australia has a set of explicit National Goals of Schooling, it appears that the levels of consensual agreement and enactment are different in each state.

We have a broadly shared national set of groupings or categories of essential learnings but not all the system sets are inclusive, future-oriented and able to be taught by existing teachers. We do particularly well on the standards benchmark but need to pay attention to annotated work samples. We do less well in establishing connection and coherence with other initiatives—a fundamental requirement of the systemic approach. (Kerr 2000, p.10)

The shift to health dominated physical education over the last two decades has resulted from a broader view of health to include mental, physical, social and spiritual dimensions—a ‘wellness’ model, as evidenced by the description of the Health and Physical Education KLA in the 1994 Statements and Profiles. Indeed, physical education was almost completely subsumed by health education as Wilson outlined in commenting on the ‘intellectual accommodation reached by Ministers’ in 1993 to reach agreement on the eight key learning areas of the National Statements and Profiles (Wilson 2002, p.4).

Although the name physical education was retained, its identity diminished in a swirl of notions of sport on one hand, and fitness and health on the other. The survival of physical education through these times epitomises the struggle to retain its identity. In a statement that highlights the tendency of members of the profession to deal only with the symptoms rather than the cause of the diminution, the justification for the changes ‘constantly in process’ are put forward as:

The reason can be found in the fact that the practices constituting physical education, like any other school subject, are neither fixed nor stable. We have learned from the work of curriculum historians that bodies of knowledge (areas of study), their naming and organisational forms in educational institutions, are constantly in process. Moreover, it is the rule, rather than the exception, that groups within professions and other interested parties regularly contest dominant definitions of a field. (Tinning, Macdonald, Wright & Hickey 2001, p.165)
Changes in naming and meaning are, therefore, more the norm than the exception. Nevertheless, the fragmenting and constant reinterpretation of physical education reflect the unfortunate truth that the representation and practice of physical education have diminished in strength and quality as contributors to the general education of the individual through physical activity.

In the next chapter, the thesis turns to focus on the reasons why human motion is not acknowledged and more widely utilised in education.
Cultural ideologies and practices destructive to human motion in education

If we allow our brain to think it is us rather than a key part of us, we cannot learn the true nature of what it means to be human. (Pearsall 1999, p.16)

The history of physical education during the last 20 years, as discussed in Chapter 2, highlights the shifting conceptualisation of the learning area. From the initial concept proposed by The Education Board of Great Britain’s 1933 Syllabus of Physical Training for Schools which envisaged the object of physical education as ‘to help in the production and maintenance of health in body and mind’ (Education Board of Great Britain 1933, p.9), the subject has come to be dominated by health discourses – discourses which often do not involve any activity at all:

This syllabus cannot do more than indicate the scope of Physical Education, and it should be recognised that Physical Training given at, or in connection with, the school, is only a part, though a very important part, of the whole subject.

It is especially during the period of growth, when body, mind and character are immature and plastic, that the beneficial influence of Physical Training is most marked and enduring; and the highest and best results of education cannot be attained until it is realised that mental culture alone is insufficient, and that Physical Exercise is necessary to the development not only of the body but also of the brain and character. (Education Board of Great Britain, Syllabus of Physical Training for Schools 1933, p.9)

Furthermore, the broadening conceptualisation of health to include wellness has caused the health learning area to become more multi-dimensional. It now evinces a focus on social, emotional, physical, spiritual and intellectual aspects of living rather than being mostly concerned with the prevention or elimination of diseases (Corbin 2002). As a result human motion has become increasingly corralled and practised in specific forms that promote physiological fitness and skilled participation in cultural sports and games.

The marginalisation of human motion has continued within Health and Physical Education through the inclusion of topics such as personal and community health, safe behaviours, personal and group relationships and personal and group identities.
Further, the educational involvement of human motion has become almost non-existent in the other learning areas such as Science, Mathematics, English, Society and Environment and Technology in the design of curriculum frameworks throughout Australia.

Physical education has become a chameleon, changing to meet a variety of educational emphases driven by a variety of societal and political demands. The holistic view of education involving human motion in the development of the full potential of the individual has dimmed. Besides physical education's usurpation by Health, it has also fallen victim to divisions within its own discipline.

As the need for more specialist knowledge relating to physical activities was required in society, for example, the holistic view was overwhelmed by the reality that physical education was being broken into discrete parts according to the whims of its practitioners. Disputations about definitions and names of sub-disciplines, issues, implementation strategies, management and funding all exacerbated the loss of unity and vision within physical education; and contributed to the ascendancy of Health (Bouchard, McPherson, & Taylor 1992; Kirk, Nauright, Hanrahan, Macdonald, & Jobling 1996).

The causes of the fragmentation and the varying interpretations about what physical education stands for have received scant attention in the physical education community. A comprehensive and clarifying theory that would enable better management of the 'poor condition' of physical education has not been developed. Such a theory, if it were developed, would be the key for an endeavour to effectively strengthen the profession and unify knowledge, practices, beliefs and values that have unfortunately been separated, a separation that has weakened the professional entity.

A major intention of this chapter is to identify opportunities for the development of such a theory, involving a renewed appreciation of the inherent value of human motion in terms of what it means to be human. The chapter will also isolate some fundamental reasons that explain why the value of human motion in education is not fully appreciated and subject to limited quality and practice.
Powerful ideologies and practices that permeate Australian society, as well as communities around the globe, will also be examined. These are associated with mind-body dualism and the dominance of mind over body, of the intellectual over the corporeal. The investigation of these issues will take the form of a description of mind-body theories and their applicability to the current problems in physical education; and analyse the beliefs, values and practices that have divided rather than unified education practices.

To turn the focus of the study toward rethinking the Western philosophical tradition of human motion in education, the chapter concludes with the examination of a new understanding of what a person is. This focus argues for the development of a more manageable theory and philosophy of human motion in education that could facilitate a wider understanding of physical education, and its value in the process of human development and learning.

The chapter argues for the collection of empirical evidence that can confirm the way in which individuals experience their lives as whole individuals, despite powerful ideologies based on the view that the world is literal and reason is disembodied. It will be suggested that education professionals need to look for opportunities for human motion in education: particularly a re-examining of the nature of persons and the way in which they function. Such examination could pave the way for physical education to play a larger role in the unification of the esoteric and cultural with the biological and ecological aspects of living.

3.1 Mind-body dualism and Australian physical education

Physical education has been, and continues to be, subject to the consequences of the common ideological division between the mind and the body as much as any profession. Moreover, because the profession is directly related to human physicality, the effects on the representation of physical education are more pronounced. A schism has emerged between practitioners in the field, particularly between physical education teachers and academics. The divisions can be observed through an investigation of the development of the discipline of human movement studies in
Australia as an outgrowth of physical education and the ensuing profession-discipline discourse.

Human movement studies exemplify the outcomes of dualist processes operating in physical education. It is defined as:

...the comprehensive and systematic study of human movement. It is that field of academic inquiry concerned with understanding how and why people move and the factors that limit and enhance our capacity to move. (Abernethy, Kippers, Mackinnon, Neal & Hanrahan 1996, p.3)

Thus, the academic discipline has the primary function of developing a coherent body of knowledge that describes, explains and predicts key phenomena from the world of human movement.

Conversely, Abernethy and colleagues describe professions relating to physical education as 'trying to improve the conditions of society' (Abernethy, Kippers, Mackinnon, Neal & Hanrahan 1996, p.5). This is achieved through the provision of regulated services in which practices and education or training programs are developed in accordance with knowledge generated from the discipline and other relevant disciplines. The basis for human movement studies as described by Abernethy and colleagues highlights the need for more rationality in the study and description of human movement and related practices:

As many aspects of the current practice of human movement involve practices based as much on fads, folklore, tradition and intuition as on sound, logical theory substantiated by systematically collected, reproducible data, it is imperative that the knowledge base for human movement studies be one based on research conducted with a methodological rigour equivalent to that of other established biological, physical and social sciences. Only through such an approach can fact be separated from fiction and a sound basis for best practice in the profession, based on the knowledge base of human movement studies, be established. (Abernethy, Kippers, Mackinnon, Neal, & Hanrahan 1996, p.4)

The structure of the discipline is diagrammatically represented as in Figure 3.1, linking many disciplines together in a hybrid of inter-disciplinary categorisations to compartmentalise the field into biophysical and sociocultural foundations.
Figure 3.1 One possible conceptualisation about the structure of knowledge about human movement. The discipline of human movement studies is represented by the shaded area. (Abernethy, Kippers, Mackinnon, Neal, & Hanrahan 1996, p.7)

The diagrammatic representation of human movement studies portrays interconnections linking the sub-disciplines, other related disciplines and the two foundations together. In reality, each of the areas identified often works in isolation, sometimes competing directly against one another for status and research grants. Many areas have their own professional groups such as sport historians, anthropometrists, exercise physiologists, exercise and sports scientists, pedagogists and those interested in sports medicine. These compartmentalisations give an impression to those outside the discipline of disjointed specialisations rather than a united approach about the world of human motion and the interrelationships between the social, biological and cultural aspect of everyday living and learning.

The discipline appeared in Australian tertiary institutions in the early 1970s based heavily on the experiences of North America and Great Britain. Earlier programs were mostly known as ‘kinesiology’, but later ones had the most influence because of the more direct term ‘human movement’. Human movement studies programs in Australia came years after overseas trends, with academics travelling abroad to study in them then returning home to establish the approach, based on the rationale that it would give the profession more credibility and organisation.

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Toward a broader appreciation of human motion in education
Melbourne University introduced a Diploma of Physical Education in 1941 under the directorship of Dr Fritz Duras. Four years later the University of Queensland established a similar Physical Education Diploma under Dr Ivor Burge, who had received his training at Springfield College in the United States.

Physical education programs with human movement studies at their core were added to universities and teachers colleges throughout the 1950s, 1960s and 1970s, with the focus remaining clearly on the professional application of physical education in schools and other community agencies such as the Fitness Councils, YMCAs and private organisations.

The first degree program in human movement studies was established at the University of Western Australia in 1973, headed by Professor John Bloomfield who had undertaken higher degree studies in exercise science at the University of Oregon. The University of Queensland followed in 1974 and was headed by Dr Allan Coles, who had completed his doctorate at the University of California in sport studies and also had experience as a department director at the Dalhousie University in Canada. Dr Coles went on to chair the Australian Sports Institute Study Group in 1981 which saw the establishment of the Australian Institute of Sport.

The existence of these discipline-based degree programs became pivotal in the separation of the discipline from the profession during the development of the Unified Tertiary Education System in the late 1980s. When a ‘unified system’ arose from the breakdown of the traditional tertiary divide between universities and colleges of advanced education and institutes of technology through the amalgamation of smaller colleges to form new universities such as the University of South Australia, the recombination of institutions forged new discipline-based programs that were perceived to have greater status than the old physical education programs. According to Abernethy and colleagues:

A consequence of this change has been the emergence of many new programs in human movement studies as former programs in physical education were ‘upgraded’ to university status. With this change, came the adoption in most cases of discipline rather than profession names for both courses and departments. … This burgeoning of university programs in human movement studies reflects not only the extensive popularity of the
field but also renewed recognition of the importance of the knowledge contained in the discipline. A strong foundation is therefore now in place for concentrated research efforts to further the discipline base. (Abernethy, Kippers, Mackinnon, Neal, & Hanrahan 1996, p.27)

At the time of these changes in the structure of tertiary institutions, the colleges of education throughout Australia were very popular, and were offering strong teacher education programs, including those in teaching physical education. During the 1970s and 1980s, physical education remained popular in schools throughout Australia. But as discipline-based programs were added to universities, and then colleges and institutes became universities, clear vocational physical education programs were progressively eliminated and the emphasis shifted to biophysical research knowledge.

It became generally perceived that the programs pursuing scientific knowledge possessed greater status than teacher education programs that emphasised the application of knowledge in the field. The disassociation of the disciplines from the profession of physical education was substantial in spite of arguments from researchers that the two were part of the same field of study:

The emphases within disciplines and professions are often characterised as theory/research versus application/practice but such a distinction is overly simplistic and potentially misleading. Applied research (including research on aspects of professional practice) is now an accepted part of the business of the discipline just as the profession may frequently be the site for original research. (Abernethy, Kippers, Mackinnon, Neal, & Hanrahan 1996, p.5)

The reality of the newly emerged profession-discipline relationship highlights the influence of the deep values and beliefs of those who are employed by governments or corporations to shape institutions such as universities and their programs in society. If dualism – the belief that mind and body are two different entities – is deep and strong in such people, they will as a matter of course develop processes and structures that may fragment and divide rather than unify and conflate. Such is the demonstrated experience of physical education in Australia.

The next section develops the notion of the strong and sometimes destructive influence of a few discipline-focussed, ‘intellectually trained’ individuals and groups occupying powerful positions from which they can disseminate their beliefs, which all too often reflect the idea of a mind-body dualism.

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Toward a broader appreciation of human motion in education
3.1.1 Intellectually trained workers

*Arena* is a publication that discusses political, social and cultural issues in Australia. In 1968 Doug White and Geoff Sharp were editors of this left-wing journal. One of the issues about which they themselves wrote concerned the place of intellectuals in the Australian workforce. White and Sharp argued that the service intellectual offered employers was the development of processes and products that quite often did not reflect the values of the intellectuals, but which were, nevertheless, solutions to problems. While the intellectual was often distant from the actual task itself in terms of attitude or values, he or she was able to approach it in ways characterised by efficiency and rational modes of thinking.

According to White and Sharp, intellectuals exhibit features that include training to apply established intellectual skills to specific practical and theoretical problems and issues. Intellectually trained workers are employed by others to devote their working activities to ends defined by their employers. These intellectuals are people such as chemists, teachers, engineers and academics who apply established intellectual and scientific skills in work geared to the ends laid down by owners or controllers of large scale industrial and administrative complexes (Sharp & White 1968).

The intellectually trained are key persons because they are the main agents of the development of techniques that revolutionise technologies for more efficiencies and specialised outcomes in a rapidly expanding world. Such processes include management systems, communication organisation services and education programs. However, it is important to recognise that the contribution is not material; it is primarily conceptual in nature.

Their contribution is made through the analytic dismemberment and reconstruction of processes in the service of given task requirements. In this context the analysis of problems uses generalised knowledge to formulate solutions, not necessarily knowledge directly from practice. As an example, teachers, chemists, nutritionists and mathematicians all utilise intellectual techniques derived from intellectual culture rather than from consistent and wide ranging practice at the base level of their professional area. Individuals acquire the technique from universities and other tertiary education institutions as they are intellectually trained for their characteristic form of work, building up their repertoire of intellectual skills to sell in their
designated professions. The technique is produced directly within the intellectual sphere and applied in a range of other areas, such as the mechanisation of routine tasks and organisation of management systems.

Intelligently trained workers are not simply a higher level of skilled worker. Their skills and techniques are qualitatively different from those of other skilled workers, and they cannot work without maintaining a tie to the intellectual culture from which they emerged. They are constantly tied down in their work but must be constantly liberated from these ties to return renewed for effective work after contact with their sources in the intellectual culture of their training. The common feature among the intellectually trained is the utilisation of the intellectual technique that derives from the systematised achievements of the sciences, including their rational methods of procedure.

Material technique is getting to know how to carry out a particular task through slowly being habituated to get the right feel of things. On the other hand, the intellectual technique is derived from applying scientific knowledge to identify the relation of means to an end. The latter comes from scientific knowledge or skills. The former is learnt in the process of carrying out particular tasks. This does not mean that the craft technique is all feel and habit and the intellectual technique purely rational grasp. The important point is that the consciously rational element tends to be more significant in intellectually trained workers.

Secondly, the generalisations inherent in any application of technique are of a different order. Scientific technique relates the means to the ends on the basis of fairly abstract generalisations and theoretical constructs including modelling about the properties and relations of objects. It becomes possible to exactly calculate cause and effect relationships and render explicit through analysis specifications of technical operations that are an expression of what craftsmen once knew ‘in their gut’. By doing this, outcomes of higher levels of mechanisation and automation are possible, and fundamental concepts developed by intellectuals may become common across a variety of areas, including production lines or administrative processes. The intellectual technique derives from the intellectual culture, not the specific field of work.
Finally, because intellectual technique rests on highly conscious abstract generalisations and their relationship to particular situations, it is anti-traditional. It stands or falls by appeal to efficiency rather than to established ways of doing things.

Because of these characteristics, the intellectually trained often prefer to work in a society that encourages either arts, science or literature than on the job. Because of the abstract forms of generalisations involved and the need to gain a working acquaintance with whole areas of knowledge, they are trained in a more general sense than the particular tasks to which they will apply their technique.

In general, it is only possible to apply the intellectual technique if certain attitudes of reasoned detachment, integrity, persistence and a degree of free communication are accepted. In addition, it is common among the trained workers for the notion of service to be a deeply entrenched value. These standards all derive from the intellectual culture. Because the culture tends to pursue the generalised goal of knowledge and its extension, from the viewpoint of social relations, these intrinsic work standards tend to take the form of universal moral rules.

Because of the highly conscious character of the intellectual technique and its tendency to be governed by universal moral rules, together with the need for a long period of training within institutions exhibiting the intellectual culture, a distinct ideology tends to be formed for the intellectually trained. However, it may happen that none of these features relates to the actual conditions the intellectually trained individual experiences when in work.

The actual work of the intellectually trained has a high degree of variety and this diversity maintains their interest in the work. The intellectually trained worker is often called on to exercise their general powers of knowledge and ethical standpoints in relation to a variety of tasks. As a result, the intellectually trained person is autonomous and cannot be readily supervised (except by those who share their abilities). They tend to be self-regulating and so more conscious of their individuality.

Often, however, the intellectually trained have little voice in setting the objectives they strive to attain since they are employed to use their knowledge to satisfy objectives that are established by other authorities. Therefore, they become alienated from the valuable products of their efforts, which may include implementation strategies.
A quintessential example of the separation of the intellectually trained from their employers and from their employers' objectives and implementation strategies is Sir Mark Oliphant's involvement in the Manhattan Project:

We had no idea whatever that this would one day be applied to make hydrogen bombs. Our curiosity was just curiosity about the structure of the nucleus of the atom, and the discovery of these reactions was purely, as the Americans would put it, coincidental. (Oliphant 1967)

Sir Mark completed the work on the Manhattan Project in April 1945 and returned to England. He did not witness the test firing of the Bomb, nor was he involved in the often intense and top-secret Bomb-usage debates that followed. After the atomic bomb was dropped on Hiroshima on 6th August 1945, he could not believe that it had actually been used:

From that time on, he became an advocate for the peaceful use of atomic energy, speaking out and encouraging the 'positive cooperation for good, to ensure that the scientific achievement of atomic energy is a decisive step towards the better life for all. (Cockburn & Ellyard 1981, p.130)

Examples of the separation of the intellectually trained from the products of their tasks also include the implementation of the Daily Physical Education Program, which was introduced and locked into a strategy based narrowly on a 'fitness and skills' emphasis. Another example was the setting of objectives and parameters for the Health and Physical Education learning area of the South Australian Curriculum and Accountability Framework (SACSA) by the Department of Education, Training and Employment. The project was divorced from the writers of the Framework who had no say in its very limited implementation in schools.

As a consequence of this disassociation, the intellectually trained are likely to have contempt and disregard for the employer who may judge outcomes and events by a different set of standards from those intellectuals would choose for themselves. Being conscious of their humanity and aware of what they are doing, intellectuals are anxious to ensure that their lives retain rational order. As a result and because of the nature of their sets of values, they are more concerned about the uses of the products of their labours than most other styles of workers. There is always the potential for alienation associated with the intellectual using the intellectual technique for employers:
But because of the values implicit in intellectual work through its tie to the intellectual culture a collision tends to arise between two ideologies. On the one hand there is the rational universalist, humane and autonomous outlook of the intellectual culture. On the other there is the sectional, 'materialistic' and purely instrumental approach of owners and controllers. (Sharp & White 1968, p.33)

The centres of formation of the intellectually trained include universities and TAFE colleges. Due to the tendency for intellectual workers to be liberal, humane, questioning, rational and autonomous, and to challenge the 'materialistic' approach of their employers, centres of learning therefore can become centres of conflict. It therefore becomes critical for government and capitalistic instrumentalities to control places like these centres and to encourage the ethic of 'service' for ends determined by others.

Today consortia, collaborations, consultancies, research grants and sponsorships represent ways in which business is conducted. The sale of labour by intellectuals, particularly academics, is part of the 'performance management' practised by universities and is encouraged among individuals and groups.

It is this use of the intellectual technique by individuals and groups throughout Australia that goes to the heart of the cause of the fragmentation within physical education and its loss of emphasis on a whole-of-person model. When individuals or groups are commissioned by employers through grants and sponsorships to develop solutions to issues that are related to human motion, such as obesity, the product of their work is generally bounded by parameters inherent in the intellectual technique; and also by the focus on a single problem. Those who have been commissioned are often neither responsible for identifying the problem nor for implementing solutions. Their sole responsibility is to offer solutions that will be acted upon by others – or not. Holistic approaches to problems are therefore unlikely.

3.1.2 The conjunction of mind-body dualism and intellectual technique

Observers such as Lindsay Fitzclarence argue that science and technology in the 20th century elevated 'mental labour' in importance and denigrated manual labour (Fitz Clarence 1990). In doing so, a wedge was inserted between the mind and the body. In this way, the human body came to be viewed as an object with associated
value that converted it to a commodity. Under immense pressure from the creative powers of the intellect, the human body is taken apart and reconstructed in many ways.

Through the application of intellectual technique, the fragmentation of the body into various forms and functions increases manyfold. The body and various forms of physical activity become thought of in technical and instrumental terms, with varying commodity value. Sports science typifies the analytical de-construction of the body with the intention of improving sporting performance. Thus, the intellect controls the body and its activities in very powerful, sophisticated and complex ways that have changed the structure of physical activity and physical education. The underlying ‘meta-therme’ of this separation of mind and body is phrased by Fitzclarence as the ‘politics of dualism’; and it is the politics of dualism ‘which mobilises the different state instrumentalities to support and legitimise a dualist and divided world’ (Fitzclarence 1990, p.106).

In this context, the body and its activities are reconstructed in very instrumental terms. As a consequence, physical performance brings mega-status and is thought about in terms of earning capacity. Moreover, the body becomes a ‘mannequin’ to be assembled and disassembled according to fashion, style and image. Physical activity is also commodified and placed under the control of the marketplace, leading to personal and social fragmentation. When the body is perceived in this way, the physical self may be regarded as inert or robotic. Under the control of the ego and the intellect, physical activity may come to be regarded as unnecessary or of no significance, unless some sort of ‘value’ can be applied to it.

Ironically, an important consequence of this attitude and way of behaving is the focus on literal and specific outcomes related to the body or a physical activity without necessary care for intellectual concepts such as tradition or responsibilities for the future. There is often no concern about the wider influences or consequences of an ‘action’. Examples are plentiful, including the uptake of activities dictated by fashion and market pressure (to achieve glamour, colour, excitement, adventure and competition), such as diets, drugs, Kellogg’s fitness programs, jump rope days, computer fitness programs, gym memberships and ‘special’ sports clothing.
3.1.3 The separation of the mind and body in physical education

Mind-body dualist beliefs and values combined with the use of the intellectual technique by trained intellectual workers in the field of human movement have created division and fragmentation within the physical education profession. In turn, their work influences societal values and practices and formulates a perception of the profession from the outside.

In particular, the perceptions of politicians, government bureaucrats and leaders in large corporate organisations have been guided by the products (solutions to issues and problems) developed by these intellectuals. Thus there is a two-way effect of the conjunction of mind-body dualism with intellectual technique. Firstly, the profession is damaged from within because of fragmentation and secondly, societal attitudes toward physical education are narrowed, with understanding of physical education skewed toward categorised parts and not the whole view of what physical education potentially stands for.

The conjunction has framed the way physical educators, state education department officers, curriculum writers, ACHPER administrators, school administrators, general classroom teachers and parents think and act. As a result, a disjointed and haphazard hotch-potch of activities dictated by the day-to-day demands and pressures of school communities and state education authorities are taught with varying regard for the children, and often with no connection from the past or to the future, by heavily burdened classroom teachers who mostly do not see the need or have the training to teach physical education, even though curriculum assessment structures may be in place. The result is that physical education is perceived as unnecessary in the education process, resulting in the need for it to be continually justifying its place in the school program.

Fundamental Motor Skills Program. One of the most potent examples of the fragmentation of the mind and body was demonstrated during the development of an initiative related to fundamental motor skills in primary school children that began as a result of research conducted by Jeff Walkley and colleagues in 1993 that indicated that the physical performance of all primary school children was below the level it should be.
The research was compelling and revealed the paucity of fundamental motor skill acquisition in early and primary year aged children. As a consequence it was recommended that the development of these skills be the major focus of physical education. Furthermore, Walkley and colleagues argued that the development of fundamental motor skills occurs in a rational, 'sequential and orderly manner', indicating a rigorous regime of skill inculcation, including the progression through components of each fundamental motor skill (Walkley, Holland, Treloar, & Probyn-Smith 1993, p.11).

In addition, Walkley and colleagues challenged the idea that children learn best by playing motor skill games. He asserted that there was irrefutable research evidence that teaching physical education by playing games is a very inefficient way to help children learn.

Many schools base their physical education programs around the playing of games and sports, and yet, the evidence is very clear that the simple provision of game and sport playing opportunities is insufficient to allow children to develop motor skills. (Walkley, Holland, Treloar, & Probyn-Smith 1993, p.14)

Walkley and colleagues argued that if a game is used as an instructional method, the teacher needs to show children the skills that are to be practised. It was his strong belief that children rarely are able to learn by themselves what is planned to be learned unless they are directed to the intention by the teacher’s instruction.

In 1996 the Victorian Education Department commissioned Walkley, Holland, Treloar, & O’Connor, to undertake further research ‘in response to the recognised need’ to produce a resource to encourage teachers to efficiently teach fundamental motor skills (Elder 1996, p.1). The result was the development of *Fundamental motor skills: A manual for classroom teachers*. In it, an elaborate lock-step methodology was developed by Walkley and colleagues for primary classroom teachers to deliver the 11 fundamental motor skills considered the most essential after wide consultation. The manual advised teachers that fundamental motor skills took a long time to master. It stated a time of between 240 minutes to 600 minutes was needed for children to learn and correctly perform fundamental motor skills. In a calculation
incorporating the average number and length of time of physical education lessons, holidays, pupil-free days, camps and so on, he concluded that children could only learn five fundamental motor skills each year:

This information often startles teachers. But, if the intention of teaching physical education is for children to learn, only a small number of fundamental motor skills can be mastered in a year. (Walkley, Holland, Trelour, & O’Connor 1996, p.8)

A chart was designed to display the age and sequence of fundamental motor skill components to indicate the approximate ages at which fundamental motor skills should be learned. Assessment score sheets were produced for each of the 11 skills and the teachers recorded the standard achieved by each child in the class. A standard was the recommended age by which time the child could be expected to master a component of the fundamental motor skill. When all of the components had been achieved, the child was said to have mastered the skill.

Based on the logic of the research and the supporting manual, many teachers and school communities focused their full efforts on fundamental skill development in their physical education programs. The emphasis was not on other important learnings, such as identity, self-esteem or interrelationships. It discussed wider issues of better social relationships developing because the students would acquire more competencies and could successfully be involved in games and other pastimes. Thus, the fundamental motor skills emphasised were related to organised sports and games and it was transmitted to the teachers in Victoria that these were the most important skills to inculcate in their students.

Criticism of the Program. It is not surprising that the Fundamental Motor Skills Program attracted critical comment from astute leading Australian physical educators. The nature of the concerns were exemplified in a critique by Jan Wright, in which she proposed that fundamental motor skills testing was problematic practice. In her analysis from a feminist perspective she expressed the view that testing moves the physical education profession away from a broadly based curriculum that connects with the interests of the students (Wright 1997).
The creation and implementation of Fundamental Motor Skills in response to the observed poor skill level among students provides a vivid contemporary example of the mind-body dualism that is encouraged by intellectual technique. The public reporting of comments by politicians, research by academics in public health and research in the human movement sciences worked to initiate a very narrow solution – motor skills testing – that allowed physical education to be portrayed as a learning area focussed on those skills only:

> It works to define physical education, often in narrow ways, which work against the development of syllabi that have tried to incorporate a broader, more innovative and critical focus. (Wright 1997. p.18)

The construction of qualitative performance criteria for judging the mastery of each developmental component of fundamental motor skills became an end in itself for teachers to teach toward. Her concern was the danger that teachers, as well as others, could conclude that motor skills teaching and testing comprised a quality physical education program.

The choice of the 11 fundamental motor skills contributed further to the narrowing of the definition. When human movement specialists (professional intellectuals) make these sorts of selections, the beliefs and values associated with their training influence their decisions, inclining them to privilege skills necessary for organised competitive sporting activities. Wright notes that the impact of deciding to include these movements at the expense of others has been ‘rarely considered’. The fundamental competencies of flexibility, rhythm and balance, she argues, would seem to be more indicative of capabilities and safe behaviours and be more inclusive of all students, particularly females.

> Where most human movement specialists are very concerned with issues of validity and reliability, their writing is remarkable for its non-examination of the social consequences of their work educationally and the consequences for different groups of students. (Wright 1997. p.19)

In particular, Wright questioned the way in which Fundamental Motor Skills would be used and in what way they would contribute to, or challenge, particular notions of the body, of femininity and masculinity. The skills were mainly related to performance in traditional competitive team or dual sports, and played mostly by
males. They were not representative nor did they take account of activities girls were most likely to experience such as dance and gymnastics. Therefore the testing associated with Fundamental Motor Skills contributed to the perception of gender difference between girls and boys. Because of the nature of the skills, girls appeared to be deficient or lacking, whereas the boys seemed to exhibit superior masculinity and skill.

The way in which the tests were conducted and the reporting throughout the media contributed to differences in gender construction in society. As well, the testing did not take into account personal details of the students such as histories, interests and aspirations. The testing confirmed that girls in general were not as skilled as boys. The testing established a process of normalisation that set standards against which others were judged to be either normal or abnormal – winners or losers.

Skills from competitive sports and organised games have been privileged in education curricula throughout Australia and most of the Western world. Emphasis on a limited skill set has encouraged gender construction differences throughout western societies (Wright 1996). Girls are considered to need extra attention in order to attain skills that will bring them closer to male standards.

The impact of the work of these intellectuals in the profession is most powerful and provides a devastating result for the potential of physical education to reach all students equally and engage them in holistic learning. In concluding her concerns about Fundamental Motor Skills, Wright underscores the very cause of the divide that continues to plague physical education (and many other areas of education):

Again, this is not simply about fairness. It is about relations of power, about who can define, who can determine what is valuable and what is not and how this confirms status and privilege on those who already have it. Boys who do not measure up are in a different kind of trouble because for them it is their very identity as male that is at stake; at least for girls, failure at sport does not undermine their claims to femininity. (Wright 1997, p.20)

Although it may not have been the intention of Walkley and his colleagues, physical education was fragmented through the conceptualisation of the body as a mechanical device to be skill-honed, regardless of the nature of the mind associated with it. The
isolation of this aspect moves to centre-stage the acquisition of a set of privileged skills at the expense of other aspects of learning when moving about the world. The development of Fundamental Motor Skills exemplifies the conjunction of mind-body dualism and intellectual technique in physical education.

The importance of this initiative is observed in the context of the messages it transmits to the wider community about the identity of physical education. It has significant influence on the way society develops understandings of the rationale and philosophy of physical education and its role in contributing to the development of students. Significant events like this portray the tremendous damage that is done to the identity of the profession, most importantly the compartmentalisation and flow-on effects of different aspects being ends in themselves, rather than being part of a unified and broader physical education for all students.

In contrast, emerging physical education programs based on the unique developmental stage of each student, portray connectedness in learning in an holistic approach that provides resistance to the influences of dualist fragmentation. Exemplifying such programs is one developed by David Gallahue and Frances Cleland-Donnelly who state that the aim of physical education simply and succinctly as ‘to set aside daily a portion of the school day devoted to large muscle activities that encourage and develop learning to move and learning-through-movement’ (Gallahue & Cleland-Donnelly 2003; p.10).

Their approach emphasises the need to not view the student as being mind-body separated and compartmentalised.

Children’s development is frequently studied from a compartmentalised standpoint focusing on one domain (cognitive, affective, or motor) of human behaviour to the exclusion of the others. This has led to an unbalanced view of the developmental process and resulting education practice. It is crucial for those interested in developmental physical education not to compound the errors of compartmentalisation and instead to view the child as a total integrated being (cognitive, affective, and motor).

Compartmentalisation is a root cause for the difficulty that the physical education profession has had historically in establishing itself as a legitimate aspect of the school curriculum. Only when educators in general, and school boards in particular, recognise and respect children as multi-
faceted individuals with a wide range of backgrounds-and that becoming physically educated involves complex interaction among the cognitive, affective and motor domains-will physical education take its place in North American schools as a legitimate and respected force in the total school curriculum. (Gallahue & Cleland-Donnelly 2003, p.11)

This is a positive example of the combination of the intellectually trained worker having an ideology of students as integrated beings creating beneficial physical education programs for the students, sound education frameworks for schools, and a more accurate portrayal of the profession.

3.2 Mind-body dualism

Mind-body dualism is a theory that asserts that substances are either material or mental, neither type being reducible to the other (Flew 1979). It is the belief that reality is made up of two separate parts, one spiritual or mental and one physical. Each is influenced by two separate forces, one good and one bad (Manser 1997).

In the context of the current study, dualism is the separation of the mind and body, metaphorically and literally, that has been a very long and deeply entrenched tradition in Western thought, originating with the writings of the ancient Greek philosophers (Rintala 1991).

Since the beginning of the Industrial Revolution and now with the development of computers and robotics humans have removed the body from many workplaces, replacing its activities with those of machines. Similarly genetic engineering has placed humankind at the threshold of a time in which the mind will be used to reproduce manifestations of particular forms of the human body through mechanisms such as human cloning.

This conception of a person as divided into mind and body has had, and will continue to have, profound influence, particularly in the fields of education and medicine. In education, the split is discernible in the assigning of matters of the 'mind' to the care of the classroom teachers while the care of the 'body' is given over to physical educators. In education and community work sites where this dualist concept of a person is accepted, either explicitly or, as is most often the case, implicitly and uncritically, physical education is bound to suffer:

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The mind, as the component that thinks, is valued over the body, the non-thinking thing. Since physical educators supposedly deal with the body, the non-thinking component, they and their subject area are relegated to lower status in educational institutions. (Ross 2001, p.92)

An associated important issue arises from the generally held view that the sole manifestation of thought, which is a function of only the mind, is verbal through either speech or writing. The ‘body’ is regarded as a non-thinking thing, hence it cannot manifest knowledge nor demonstrate intelligence. Thus skill acquisition or skill execution, no matter how brilliantly presented, have traditionally not been accepted as demonstration of knowledge since it is perceived that the ‘mind’ is only marginally involved. These problems beset physical education when the mind-body dualism approach exists.

3.2.1 The nature and origin of mind-body dualism

The following analysis of mind-body dualism draws from psychology and philosophy. These disciplines discuss the ideas and beliefs that provide the context for viewing the dualist influence on understandings about physical education and ultimately the interrelationship of the biological and cultural self. Throughout the analysis the limitations of mind-body dualism are illuminated to realistically view the nature and strength of the ideology and observe the weaknesses that provide opportunities for countering the dualist influence so that the physical education profession might move forward with a stronger identity.

A deeper understanding of the nature and influence of mind-body dualism is provided through the insightful work of John Shobris (1994) in his monograph The Dualism of Psychology. As described earlier, mind-body dualism historically has the belief of a mind or spirit/soul existing separately from the body. Some versions of the dualism envisioned the mind/soul/spirit as ghostlike reproductions of the body while other more sophisticated versions regarded them as invisible, immaterial and immortal matter. In the context of the current study, the mind/soul/spirit will be referred to as an entity – mortal or immortal – that is perceived as separate from the body.

According to Shobris, Rene Descartes a 17th century philosopher and founder of analytical geometry, formulated the modern ideology of mind-body dualism:
Descartes believed that the soul was immaterial and capable of free choice, whereas the material world, including the body, was corruptible and subject to strict cause-and-effect relationships that were amenable to mathematical analysis. (Shobris 1994, p. 1)

During the 18th century, attempts were made by a few philosophers to move away from mind-body dualism, but alternative notions were developed within the dualist way of thinking. Combinations of eliminating the mind or body or both were proposed. For example, John Locke envisioned the mind as a blank slate to be impressed by life experiences. George Berkeley virtually eliminated matter by reducing it, including the body, to ideas generated by the all-knowing mind of God. Philosophers continued with their attempts through the 19th and 20th centuries with limited success:

Twentieth-century philosophers have not fared any better. For example, although many existentialists deny the existence of God and an immortal soul, they continue to remove humans from the rest of nature by attributing 'free will' to people's motives, a characteristic classically attributed to the soul. (Shobris 1994, p. 1)

The source of powerful influences from the belief in mind-body dualism emerges out of what Shobris describes as the 'dilemma of dualism'; it is the dilemma that occurs because of the 'inescapable reality of our nature' (Shobris 1994, p. 3). The spirit/mind/soul is thought to be eternal and indestructible, whereas the world of matter, such as the body is considered to be corruptible, transient and often bad/evil. Throughout time, myths and tales have depicted epic clashes in the world of matter, between good and evil. Goodness is often identified with a Godhead like Jason and the Argonauts, while badness/evil is identified with opposition such as the Devil. The spiritual entities of bad/evil, although belonging to the eternal/indestructible world, often intertwine with the world of matter, 'tempting mortals to partake in the pleasures of the flesh and other transitory and, subsequently, anti-spiritual activities' (Shobris 1994, p.3).

Awareness of mortality. A common characteristic of the major religions throughout the world is that they guide followers toward spiritual eternity. People see decrements in their development and functioning as they age and the inevitable reality of death in their lives. To escape impermanent existence, corruption and decay an answer is to align with the view of eternal life in the hereafter (Carmody & Carmody 1984).
Humans are aware of their mortality and know the goal of self-preservation will eventually be denied. They are told that one day they will die and constantly see or are aware of other dead humans, usually when they reach the seventh, eighth or ninth decade of their lives. The phenomenon of aging is a constant reminder that no matter how hard they work on self-preservation, they will eventually deteriorate (Barnes 1987):

Our answer to this emotionally disturbing and even dreadful condition is dualism. Decay is the work of Satan but, fortunately, if we lead a life in accord with the Good (God is a derivative of this word) Spirit such as Yahweh or Christ, we may in some way share in immortality. In other words, dualism helps with the unique problem of humanity: the awareness of eventual death. (Shobris 1994, p. 3)

**Monistic materialism.** A major problem with dualistic theory is that it is untenable as an objective rational answer to ontology, the philosophical study of being, particularly the unique development of individuals within their cultural settings. During the 18th and 19th centuries, with the movement toward empiricism and the universal embrace of the scientific philosophy, the problem intensified because there was little room for an invisible spirit world. It caused problems for the cosmology espoused by the church because it was uneconomical and did not fit the data in any simple way. Because of these objections, a new monistic materialism developed that viewed the universe as a conglomeration of countless atoms interacting in a potentially predictable manner (Christianson 1978).

However, monistic materialism was not really monistic because it implied a universe of countless unrelated atoms colliding with each other to create the world. Monism sees reality as an absolute unity, a completely different perspective from such a universe of relatively unrelated atoms (Rucker 1982).

**Monism.** According to Shobris, difficulties with the concept of monism go back to the beginning of Greek philosophy. He identified that Parmenides in the 5th century BC proposed that Being is a unified genus and not a species. Parmenides claimed that Being was single and undifferentiated and did not recognise the existence of different or separate substances. The approach of Parmenides philosophy was debated among the Greeks and, in the end, was not adopted by the majority. To this day Being is seen as a species: a universe of unrelated atoms (Mateson 1987).
**Left brain hemisphere dominance.** Research and wider observations indicate that humans are a left hemisphere-dominant species. The configuration of the brain and its neural circuitry enables the delegation of functions to different areas, creating the specialisation of various parts, which includes differentiation of the cerebral hemisphere (Kalat 1998):

For most people the left hemisphere is used to categorise phenomena, discriminate, and predict the behaviour of the categorised entities by analysing their temporal arrangement. The right hemisphere, on the other hand, perceives whole patterns and integrates the world in a timeless fashion. Where the left brain categorises and separates, the right brain relates and unifies. (Shobris 1994, p. 4)

In everyday living within individuals, although both sides of the brain are used at any one particular time, it is posited by Shobris that evolutionary selection pressure probably caused a shift in favour of categorising and separating. He describes this shift occurring because of the greater need of analysis (temporal prediction of separate entities in the environment) as opposed to synthesis (timeless integration of all elements involved) in the hunting expeditions of early man (Kolb & Whishaw 1990).

This bias persists in modern man and has influenced most political arrangements and disciplines, including Western philosophy. Therefore, it is no surprise that Parmenides’ position was not accepted by Western civilisation. (Shobris 1994, p. 4)

On the other hand, Eastern religion and philosophy have become dominated by the idea of Being as unity. However, despite the strong acceptance of monism, Asian societies are subject to the same forces as their Western counterparts through the presence of a majority of left-hemisphere-dominant people. The resultant division and dualism persist in the East just as in the West. It occurs in the obvious form of an enforced caste system, but more subtlety as a struggle for the vision of Oneness (Dumont 1970):

The struggle for the vision of Oneness is dualistic because any struggle, no matter how noble, implies a division between the present situation and a more desirable situation that the struggle is directed toward. (Shobris 1994, p. 4)
Oneness. Despite the left brain bias, individuals and societies worldwide desire the peace and freedom from conflict that oneness and unity implies. This is reflected in a multitude of myths relating forms of paradise or heaven where all struggle will be resolved and life will be full of peace, harmony and love. A final Armageddon often accompanies these wherein good destroys evil. Shobris asserts that although many post-Industrial Age people dismiss these archaic beliefs, the archetype of the final resolution persists. He describes this resolution as humans evolving into more intelligent and wise beings (Cuzzort & King 1980).

If humans do not kill themselves in the process, it is believed they may reach a point of supreme wisdom and harmony expressed in almost infinite technological development that includes the management and improvement of their own minds and behaviour. (Shobris 1994, p. 4)

3.2.2 Visions of unity

Shobris describes the evolution of the visions of unity for modern man as beginning more than 2500 years ago. It involved men such as the Buddha, who was affected by the reality of human suffering and was typical of a person with right-brain processing. As such, his profound social awareness and the reality of death led him to strongly desire a solution to human suffering, which in the end was relatively simple. His answer was to do with detachment from things: ‘human suffering is caused by attachment and, therefore, the practice of non-attachment is the only way to escape suffering’ (Shobris 1994, p. 4).

In a similar approach, Lao Tze, a legendary figure from 5th century BC China, sought and found a solution to the problems of human suffering. He stated that the only way to a harmonious life was to follow the idea that thought and behaviour is consistent with the Tao or the Way. The two approaches were consistent because they transcended the world of opposites (as depicted by the Chinese yin-yang mandala) and moved beyond attachment (Campbell 1962).

It seems no coincidence that all of these thinkers are from the 5th century BC. This century represents the real birth of enlightenment, witnessing not only the birth of Buddhism, Taoism and Greek philosophy but also the development of the ideas of Zoroaster, Confucius and Isaiah. Although the last men lacked the fuller insight of the first three movements, they represented religious ideas that had a profound effect on the world for centuries and even millennia. Without the ideas these men represented, Christianity, Islam and Confucianism would never have taken shape. (Shobris 1994, p.5)

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But these men and their followers still held to dualism resulting in the battle continuing between good and evil, spirit and flesh. It seems that throughout history, the more accurate monist concepts of the Buddha and Lao Tzu were always peripheral. Over time, even Buddhism has dispersed into ever changing mythical tales most elaborately developed in the Mahayana sect (Carmody & Carmody 1984). Intellectual developments from the 17th century have demonstrated only a slight movement away from dualism: ‘dualist thinking, with the exception of a small pocket of individuals, is adhered to by everyone, even in the 20th century’ (Shobris 1994, p. 5).

Benedict de Spinoza represents one of this small pocket of leaders who devoted his life to opposing the dualism espoused by Descartes. He was a prominent 17th century philosopher and authority on Cartesianism and his writing represents one of the clearest formulations of the monist vision (Curley 1985). According to Shobris, Spinoza is clear, direct and uncompromisingly monist:

Spinoza does not invalidate the existence of God, a common practice of monistic materialists. Rather, he makes the existence of God irrelevant. He identifies God and the universe as one and the same substance. Consequently, the universe has attributes typically reserved only for God. Because the universe is God, it becomes infinite, incomprehensible, eternal and never changing. Nothing outside the universe exists because the universe has no boundaries. The universe is also simple. As a whole it possesses no structure or distinction because only finite things can have structures and distinctions. However, because infinity is inexhaustible, it possesses an infinite number of finite entities. Therefore everything possible is real. (Shobris 1994, p. 5)

Spinoza argued that good and evil lose their meaning because everything is One. He posited that evil exists only from the viewpoint of negation. This occurs when an entity is perceived as lacking something (negation) by another entity, the entity with the deficiency being perceived as evil. However, according to Spinoza, all entities are inseparable in an infinite whole, therefore none is evil (Deleuze 1988). It was his belief that entities often only perceive the finite, thus taking a small part of the whole to represent the universe.
3.2.3 Dualism in the 18th, 19th & 20th centuries

The majority of 18th and 19th century philosophers followed the arguments of Descartes, not Spinoza, reflecting the continuing dualistic thinking within the modern mind. The thinking of the philosophers of these times ‘was fundamentally an attempt to correct or improve on Descartes’. (Shobris 1994, p. 5)

According to Shobris, within the belief of monism, causality is a reality. However, he questioned the earlier approach of Hume who argued that perceptions occur as disconnected entities linked only by inference. Shobris identified that the problem with Hume’s vision of monism was that it was based on two separate entities:

> As Parmenides indicated 2500 years ago, Being is a genus. In other words, Being is a singular, unbounded substance underlying all the different things of the world. Things only appear different because humans are finite entities and see only a small, finite part of the universe. We have selective perception. The perception of difference comes in when we have access to different and only finite qualities of the universe, giving the appearance of separateness. Although each object seen is distinguished from everything else by the perception of unique qualities indigenous to that object, in reality, all objects have an infinite amount of qualities indistinguishable from the infinite whole. Each part, therefore, has a specific causal influence on other parts because of the interactive and interchangeable nature of the universe. (Shobris 1994, p. 6).

**Disharmony.** The 20th and 21st centuries have experienced unprecedented development and utilisation of technologies including automobiles, mechanisation, televisions, computers, mobile phones and recently, the human genome. Nevertheless, despite these advances, modern man continues to find it difficult to live an harmonious existence. Buddha and Lao Tzu’s suffering of more than 2500 years ago still persists today. Humankind continues to behave and reason with a left brain preference such that categorisation and sequential computation are given precedence over harmony and integration (Christianson 1978).

The potential of the human species, claims Shobris, would be conceivably endless if the capacity of the right cerebral hemisphere were to be completely tapped together with the left hemisphere:

""
Mythology would no longer be anthropomorphic and dualistic. The universe would be seen as singular and limitless, and consequently, our perceptions of ourselves would change. The concept of identity or anything else that would separate us from the world would lose its meaning. Because Being would be seen as a singularity instead of a plurality, we would literally perceive others, including non-human entities, as identical with ourselves. Consciousness, as the celebrated 20th century physicist Erwin Schrodinger made explicit, is empirically experienced as a unity, never a plurality. (Shobris 1994, p.381)

Shobris asserts that the belief that there are separate conscious entities is an unjustifiable extrapolation of the data brought on by the compelling illusion of appearances. He draws on the work of the physicist Bohm who pointed out that separateness is a kind of mirage created by the unfolding of an implicate order that ultimately is infinite, dimensionless and timeless (Bohm & Hiley 1993). The implications for all the professions, particularly education is profound. This vision puts an end to the strife among humans.

3.2.4 Dualist-monist torsion

According to Shobris (1994), science is an outgrowth of the monist vision of the universe. He claims that all possibilities are realities with no a priori way to determine the nature of reality in our stratum of the universe. As a result, empirical investigation is necessary. Everything is possible in the universe and thus the monist vision maintains a childlike openness to all possibilities, even the most unlikely. In this respect, 'monism is radically anti-dogmatic' (Shobris 1994, p.6). From this view, the vision is a state of right brain dominance along with a fully functioning left brain that is used as an auxiliary organ to facilitate the survival and promotion of our own and other species. The left brain and its characteristics of categorisation and temporal perception are never mistaken for the whole and it is clearly located in the ‘atemporal, holistic vision of a fully realised right brain’ (Shobris 1994, p. 6).

Humans are not, however, a right brain dominant species and never have been. Environmental destruction and pollution are typical of the thoughts and actions of left brain dominance. Most humans struggle or fail to see their connection to the whole.
According to Kolb & Whishaw (1990), it would not be unreasonable to interpret the obvious pollution and seemingly senseless destruction of the environment as a reflection of right frontal lobe dysfunction:

Somewhat like the right frontal lobe-damaged person, the human species as a whole has appeared for millennia to have limited concern for or awareness of its surroundings, largely focussing on the single-minded promotion of its desires, tastes and perceived needs. Although this single-minded pursuit is not unusual in the animal kingdom, other species’ single-minded self-promotion is balanced by their relative powerlessness to dominate the whole ecosystem. It is only the unique interplay of an overall powerful brain with a significant left hemisphere bias in humans that may eventually prove to be a lethal combination. (Shobris 1994, p. 6)

This analysis of mind-body dualism draws to a close with reference to theory from Gardner’s 1983 work on multiple intelligences that positions the monist-dualist torsion in context for this current study. His argument is that humans are biopsychosocial creatures (Gardner 1983). A reciprocal relationship exists between the biology, psychology and social make up of each individual. This is in accord with the dynamic systems approach to human development pioneered by Kamm, Thelen and Jensen (1990):

The underlying assumption of a dynamic approach to behaviour and development is that biological organisms are complex, multidimensional, cooperative systems. No one sub-system has logical priority for organising the behaviour of the system. (Kamm, Thelen & Jensen 1990, p. 24)

Recognition is rapidly gaining support among present day philosophers, researchers and developmentalists about the ‘process-orientation’ way humans grow and develop successfully. They emphasise the essential interdependence of the environment, the biological inheritance and the adaptation to tasks required within the culture and environment (Damasio 1994, 2000; Gallahue & Ozmun 2002). As a result, the dualist notion is no longer tenable for describing the nature of human existence.

Shobris illustrates the weakness of the mind-body dualistic view of a person by describing the more realistic nature of a person wherein the relationship between the biological, social and ecological are inextricable.
Without the biological inheritance of flexible, redundant neural circuitry, we would not be able to benefit from experience, especially social experience. Equally, without the social or cultural milieu, human biological inheritance would be inadequate to create a fully functioning human being. Last, and most probably overlooked in the West until recently, the use of the biological inheritance, coupled with social information, would still be very limited without an active cognitive process that not only passively takes in information but analyses and synthesises it, rejecting or accepting various hypotheses or conclusions. Simply put, human biology, psychology and social life are integral aspects making up a single process that, ultimately, is inseparable. (Shobris 1994, p. 7)

3.3 Chapter summary

The preceding sections detailed how the influence of mind-body dualism is spread wide and deep throughout Australian society to be a powerful pervading influence on the way individuals, institutions, administrations and population groups think. It is little wonder that the effects associated with the view of a person existing in a mind-body dualism have adversely affected the acknowledgement and utilisation of human motion in education in Australia. Psychology theory and philosophy as reviewed and presented here, have illuminated the strong presence of mind-body dualism permeating throughout beliefs and practices associated with religions, medicine, science and education. The constant need to categorise, analyse, discriminate, re-organise and predict all phenomena in pursuit of an efficient and rational society is the classic dualist process at work to invent technologies to thrust Australians forward into more and more ‘smarter’ ways to think and operate in increasingly virtual modes such as through computers and the internet. However the constant dualism-monism tension is ever present to cause constant conflicts on local, national and global levels as have been illuminated in the example of the emergence of human movement studies programs.

The examples of division and fragmentation in physical education previously described in and through initiatives such as Daily Physical Education, Human Movement Studies and Fundamental Motor Skills reveal that physical education professionals (intellectuals) are as vulnerable as anybody else in relation to the cultural and societal pressures. They certainly are not immune to the tremendous pressures of the cultural ideologies and practices exemplified in the conjunction of
mind-body dualism and the intellectual technique illuminated in this chapter. Indeed they are no better able to resist the powerful forces than anybody else.

A way ahead for the profession, it seems, is to better understand the embodied mind, which has been the intent of this chapter. Such a process will enable a better management of the struggle that human motion suffers to be valued for the contribution it makes to the development and education of people.

To strengthen the identity and broaden the concept of human motion in education to be more effective and educationally sustainable, it seems that the notion of the disembodied mind needs to be left behind. There is a need to explore the implications and possibilities of thinking about people as being integrated beings connected to other beings, in turn linked to larger communities and settings.

The review of the literature discussed in this and the previous chapter has demonstrated the reasons why human motion is struggling to sustain its identity and value in Australian education. It has also revealed how they operate to compromise and weaken the professional identity of its representative in physical education. A rebuttal of the pervasiveness of the cultural ideology of mind-body separation provides a way ahead for greater valuation of human motion in education to connect with the realism and the fundamental importance of human bodily experiences.

The thesis now focuses on a review of the literature to examine counter theories and current research knowledge that contribute to a complete rebuttal of the notion of individuals living an existence in which the mind and body function separately, one in which the latter is subservient to the former.

In the next chapter, strong evidence is gathered to demonstrate that the human mind is deeply integrated with subjective bodily experiences. It describes and develops exciting new understandings of the central function of everyday human motion in the daily living of individuals as they go about the process of reasoning about the self, others and the world about them.
The rebuttal of a separate mind-body existence

The ‘lived-body’ is not an object man possesses, rather it is man and man is his body. Man’s mode of insertion into the world is the body; it is his foundation in existence. It is ‘the constantly moving and constantly irrevocable manner in which I insert myself in reality. (Merleau-Ponty, as described in Morgan & Meier 1995, p.164)

Monism is not a new concept. As we saw in Chapter 3, Parmenides was proposing ideas foreshadowing monism in the 5th century BC, and it has remained a significant philosophical construct since that time, taking on numerous subtle forms in debates between philosophers. It has never, however, threatened to replace dualism as the fundamental philosophy underpinning Western societies.

This current study, however, draws on fresh psychosocial and scientific evidence as well as philosophical argument that humans live an embodied existence that is inconsistent with central parts of Western philosophy; and this view has critical implications for appreciating the value of human motion and its intrinsic involvement in the processes of development and education in the lived experiences of people.

Emerging theories from cognitive science, positive psychology and neuroscience support this emancipatory vision. The synthesis of the theories has led to a vastly different understanding of the nature and functioning of human beings than is evident in the current popular approach of Anglo-American analytic philosophy and postmodernist philosophy. The discoveries discussed in the following sections provide an enormous opportunity for human motion in education to be revalued with the possibility of a broadened philosophy requiring physical educators and members of the wider education community to re-examine and abandon some of their deepest philosophical assumptions.

In considering these new understandings, a context is developed in which to make observations of empirical evidence gathered from students of varying ages that demonstrate the inextricable relationship between reasoning, human motion and emotion. The fresh theories and philosophical understandings emerging from the reconsideration of relationships between these core human functions provide a way to
better manage the struggle that human motion in education has consistently experienced. New attitudes will enable the encouragement, nurturing and promotion of human motion so that it can be recognised for what it really stands for in the developmental and educational processes of daily living and learning for all Australians. Advocating the appreciation and application of old philosophic arguments in innovative ways will enable a more accurate and truly representative identity for physical education to be formulated, one that resonates with education and education professionals. In this way curricula can be developed that will enhance the acquisition of the essential learnings in Australian students.

4.1 The embodiment of reason

The development of a deeper understanding of the embodiment of reason draws upon the inspirational theories of the linguist and cognitive scientist George Lakoff in collaboration with others such as Mark Johnson, and described in Lakoff and Johnson's work *Philosophy in the flesh: The embodied mind and its challenge to Western thought*. According to these writers, the defining characteristic of human beings – the ability to reason – can now be understood in a completely different way as a result of three major findings from cognitive science:

- The mind is inherently embodied.
- Thought is mostly unconscious.
- Abstract concepts are largely metaphorical.

These are three major findings of cognitive science. More than two millennia of a priori philosophical speculation about these aspects of reason are over. Because of these discoveries, philosophy can never be the same again. (Lakoff & Johnson 1999, p.3)

Based on these findings they set about constructing philosophical understandings of the mind and theories related to the functioning of a person. They argued that the most basic of philosophical beliefs are tied inextricably to views held about the ability to reason in humans. According to them, reason has been taken as the defining characteristic of human beings since the start of time and includes not only the capacity for logical inference, but also the ability to conduct enquiry, to solve problems, to evaluate, to criticise, to deliberate about how to act, and to reach an
understanding of the self, other people and the world. Thus a radical change in the understanding of reason is a radical change in the understanding of what it means to be human. Summaries of changes to the understanding of reason that Lakoff and Johnson identify from recent discoveries about the mind appear in Figure 4.1.

<table>
<thead>
<tr>
<th>The renewed understanding of reasoning.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reason is not disembodied but arises from the nature of the brain, the body and bodily experience. This means that the very structure of reason itself comes from the details of embodiment. The same neural and cognitive mechanisms that enable perception and movement also create the conceptual systems and modes of reason. That is, to understand reason requires knowledge of the visual system, the motor system and the general mechanisms of neural binding. Thus, reason is not a transcendent feature of the universe or a disembodied mind; it is shaped crucially by the peculiarities of the human body, the remarkable details of the neural structure of the brain, and the specifics of everyday functioning in the world.</td>
</tr>
<tr>
<td>2. Reason is evolutionary, in that abstract reason builds on and makes use of forms of perceptual and motor inference present in 'lower' animals. Thus it makes use of the animal nature of humans. The discovery that reason is evolutionary utterly changes the view of the relation to other animals and the conception of humans as being uniquely rational. Reason therefore places humans on a continuum with other animals and is not the essence that separates from them.</td>
</tr>
<tr>
<td>3. Reason is not universal in the transcendent sense. It is not part of the structure of the universe. It is, however, a capacity shared universally by all humans through the commonalities that exist through the embodiment of the mind.</td>
</tr>
<tr>
<td>4. Reason is not completely conscious; it is mostly unconscious.</td>
</tr>
<tr>
<td>5. Reason is not purely literal, but is largely metaphorical and imaginative.</td>
</tr>
<tr>
<td>6. Reason is not dispassionate, but is emotionally engaged.</td>
</tr>
</tbody>
</table>

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Figure 4.1  The six changes to the understanding of reason

The shift in the understanding of reason is therefore of vast proportions and entails a large shift in the understanding of what human beings actually are. The new understandings as outlined are very much at odds with traditional views of what a person is.

Such a view makes it very clear that there is no Cartesian dualistic person with a mind separate and independent of a body, sharing exactly the same disembodied
transcendent reason with everyone else, and capable of knowing everything about his or her mind simply by self-reflection. Rather, the mind is inherently embodied and therefore the body shapes reason. Since most thought is unconscious, the mind cannot be known simply by self-reflection.

Lakoff and Johnson posit that to pose questions about the nature of human beings requires the use of common human cognitive and neural mechanisms because there is no access to any form of purely objective or transcendent reason. As most of thought is unconscious, a priori philosophising will not provide access to knowledge of the mind and how experiences are constituted. Thus, to ask philosophical questions about the nature of humans uses reason shaped by the body, a cognitive unconscious to which there is no direct access, and metaphorical thought of which humans are largely unaware.

Because abstract thought has been discovered to be mostly metaphorical, answers to philosophical questions will be mostly metaphorical. This fact has major consequences for philosophic inquiry in physical education. It means that metaphorical thought is the principal tool that makes philosophic insight possible into the inextricable relationship between human emotion, bodily experiences and reason. It provides the empirical methodology to establish the validity of these relationships and confirm them for a broadened philosophy of physical education.

Jointly, the cognitive unconscious, the embodied mind, and metaphorical thought require education professionals, particularly physical educators, to acquire a new way of understanding reason and the nature of a person. What emerges is a philosophical perspective based on an empirical understanding of the embodiment of mind that is a philosophy from within the flesh and bones of humans as they move about in the world and encompasses what humans most basically are, and can be.

The following sections of the thesis provide a deeper understanding of these discoveries and their importance in the methodological approach when studying the memory narratives from participating students. The approach to be developed will enable an insight into how they reason about themselves, others and the world about them in ‘their world of being’. Of particular importance is the universal function of human motion as a bodily experience in the human capacity of reasoning.
4.1.1 The influence of the cognitive unconscious

As indicated previously, the intention of this current study is to observe daily experiences in the lives of students as they go about their tasks for survival, enjoyment or vocation. They, like all of humanity, constantly strive to discern the real actions of their subjective bodily experiences. Often these are verbalised in expressions such as ‘I feel so hot’; ‘My legs feel so tired’; ‘That made me feel like I was flying’; and ‘That forehand shot was sweet!’.

According to Lakoff and Johnson, individuals try to make sense of these experiences by constructing and using conceptual systems.

Though we are only occasionally aware of it, we are all metaphysicians – not in some ivory-tower sense but as part of our everyday capacity to make sense of our experience. It is through our conceptual systems that we are able to make sense of everyday life, and our everyday metaphysics is embodied in those conceptual systems. (Lakoff & Johnson 1999, p.10)

Since its beginning in the early 1970s, cognitive science (the study of conceptual systems) has discovered that most of human thought is unconscious in the sense that it operates beneath the level of cognitive awareness, inaccessible to consciousness and operating too quickly to be focussed on. This startling discovery has immense implications for the way people behave and respond in situations. Figure 4.2 provides an example from Lakoff and Johnson to highlight this point. Throughout the action of a simple conversation, the following is only a small part of what is occurring second by second below the level of conscious awareness.

Toward a broader appreciation of human motion in education
Unconscious operations in a conversation

Accessing memories relevant to what is being said.
Comprehending a stream of sound as being language, dividing it into distinctive phonetic features and segments, identifying phonemes, and grouping them into morphemes.
Assigning a structure to the sentence in accord with the vast number of grammatical constructions in your native language.
Picking out words and giving them meanings appropriate to context.
Making semantic and pragmatic sense of the sentences as a whole.
Framing what is said in terms relevant to the discussion.
Performing inferences relevant to what is being discussed.
Constructing mental images where relevant and inspecting them.
Filling in the gaps in the discourse.
Noticing and interpreting your interlocutor’s body language.
Anticipating where the conversation is going.
Planning what to say in response. (Lakoff & Johnson 1999, pp.10 & 11)

Figure 4.2 Unconscious operations occurring during a conversation

Thus to understand even the simplest of utterances, the operations listed together with other incredibly complex forms of thought occur automatically and without noticeable effort below the level of consciousness. It is not that these processes merely go occasionally unnoticed. They are inaccessible to conscious awareness and control.

The discovery and better understanding of the cognitive unconscious vastly enlarges the comprehension of the nature of consciousness. The latter moves well beyond the mere awareness of something, the mere experience of qualia such as pain or colour, the awareness of being aware, and beyond the multiple takes on immediate experience provided by various centres of the brain. In sum, consciousness involves all of the processes described plus the immeasurably vast constitutive framework provided by the cognitive unconscious that must be operating for awareness of anything at all.

In cognitive science, the term ‘cognitive’ is used in the richest possible sense to describe any mental operations such as visual and auditory processing, mental imagery and motor operations involved in language, meaning, perception, conceptual
systems and reason. Since cognitive operations are mostly unconscious, cognitive unconscious accurately describes all unconscious mental operations concerned with conceptual systems, meaning, inference and language.

The very existence and deeper understanding of cognitive unconscious has important implications for the philosophic inquiry into physical education. According to Lakoff and Johnson, the rule of thumb among cognitive scientists is that at least 95 percent of all thought is unconscious. Moreover, the 95 percent below the surface of conscious awareness shapes and structures all conscious thought. Indeed, if the cognitive unconscious were not there doing this shaping, there could be no conscious thought.

The vast and intricately structured cognitive unconscious includes all automatic cognitive operations and implicit knowledge and beliefs framed in terms of a conceptual system that resides mostly in the cognitive unconscious. Thus, Lakoff and Johnson describe the unconscious conceptual system as functioning like a hidden hand that shapes how all aspects of subjective experiences are conceptualised. The hidden hand forms the metaphysics that is built into the ordinary conceptual systems. It creates the abstract entities inhabiting the cognitive unconscious such as friendships, bargains and failures that are used in ordinary unconscious reasoning. Thus it shapes how subjective everyday experiences are automatically and unconsciously comprehended. It constitutes the person’s ‘commonsense’.

To illustrate the point, an example will be used from Lakoff and Johnson’s common sense understanding of the self and the common experience of struggling to gain control over the self. The struggle is not only felt, but also conceptualised as a struggle between two distinct parts of the self, each with a different value. In this case, the ‘higher’ (moral and rational) self is struggling for control over the ‘lower’ (irrational and amoral) self. This conception is fundamentally metaphoric. The conceptualisation is of two distinct parts of the self-being in battle for control over bodily behaviour. This metaphoric conception is rooted deeply in the unconscious conceptual system. It is this insight about metaphorical thought that is the basis for reasoning about the self.
Similarly, when a person tries to find their ‘real self’, another unconscious metaphorical conceptualisation is used. Thus, when a person consciously reasons how to gain mastery over themselves, or protect their vulnerable ‘inner self’, or find their ‘true self’ it is the invisible guiding ‘hand’ of the unconscious conceptual system that makes such reasoning within the individual ‘commonsense’.

This notion is greatly assisted by the hidden hand of the unconscious conceptual system to reveal how bodily experiences including human motion shape everyday commonsense reasoning. Basic concepts such as time, colour, space-relations, morality and the self are defined by the unconscious mind using metaphorical thought. All people, including philosophers, discern reality of their lived experiences using this thought. Philosophical theories like that of Descartes’ mind-body dualism are largely the product of the hidden hand of the cognitive unconscious. This understanding provides an insight into how the theories were constructed and how they can be rebutted. The understanding of the cognitive unconscious provides a radical new view of how subjective experiences are conceptualised and how a person thinks. The cognitive unconscious shapes conscious thought, moral values, plans and actions. It enables a better understanding of the self, the judgements that are made and the conscious deliberations required for living.

The cognitive unconscious is an important concept in the context of this current study. It provides the basis for an examination of the lived experiences, and the meanings derived from the experiences, in the everyday lives of students participating in this study. This understanding is consistent with Giddens’ 1978 work on layers of consciousness and Sharp’s 1985 investigations of social constitution.

4.1.2 The embodied mind

There are significant implications for physical education from the cognitive science discovery that reason and concepts are embodied. This section addresses the role that perceptual and motor systems play in the shaping of concepts such as colour and spatial-relations.

Toward a broader appreciation of human motion in education
It is argued by Lakoff and Johnson any reason processed using a concept requires that the neural structures of the brain carry out the reasoning. Thus the architecture of the brain’s neural networks throughout the body determines what concepts a person has and what kind of reasoning can be undertaken. It is reported by Lakoff and Johnson that reason makes use of the sensorimotor system. From the field of neural modelling it has been demonstrated that rational inferences can be computed by the same neural architecture used in perception and bodily movement. From the tradition of Western philosophy, reason is viewed as being separate from and independent of what is done with the body. Reason in particular, is seen as independent of perception and bodily movement. Lakoff and Johnson report that discoveries from cognitive science reveal that there is no fully autonomous faculty of reason separate and independent of bodily capacities such as perception and movement. The evidence they cite supports an evolutionary view that reason uses and grows out of such bodily capacities. The result is a radically different view of what reason is and therefore what a human being is.

Our sense of what is real begins with and depends crucially upon our bodies, especially our sensorimotor apparatus, which enables us to perceive, move, and manipulate, and the detailed structures of our brains, which have been shaped by both evolution and experience.

(Lakoff & Johnson 1999, p.17)

An important realisation through the discoveries is that humans categorise experiences and objects and that this categorisation is a consequence of how they are embodied. Categorisation is essential for survival and is not a product of conscious reasoning. As a direct result of the neural make-up of the brain, trillions of synaptic connections collect activations and channel them through considerably fewer neurons to other dense areas of the brain.

Lakoff and Johnson cite the example of the human eye to illustrate the categorisation that occurs and is for the most part, unconscious. Each eye has 100 million light sensing cells but only 1 million neurons leading to the optic centre in the brain. Thus each incoming image must be reduced in complexity by a factor of 100. This form of ‘categorisation’ occurs right throughout the brain and enables the categorisation of
trees from cars, grass, rocks and people. A small percentage of categories are formed consciously, but most are formed automatically and unconsciously as a result of moving about and functioning in the world.

Importantly, brains and bodies determine not only that categorisation will occur but also what kinds there will be because of the properties of the human body that contribute to the conceptual system of eyes, cars, arms and legs all work in different ways. The peculiar nature of human bodies shapes the possibilities for conceptualisation and categorisation.

Thus, human beings categorise because of their neural make-up and the categories that are formed within their brains are the result of their embodiment. This means that categories that are formed are part of subjective experience. They are the structures that differentiate aspects of experiences into discernible kinds. Therefore categorisation is not a purely intellectual matter occurring after the event of an experience. Rather the formation and use of categories is the essence of experience. It is a part of what bodies and brains constantly engage in. Concepts are the neural structures that enable individuals to mentally characterise categories and reason about them. In sum, rich conceptual structures are formed for the categories and reasoning about them in many ways that are crucial for everyday functioning. All of the conceptual structures are neural structures in the brain, making them embodied in a simple sense means that any mental construct is realised neurally. However, there is a more important and deeper sense in which concepts are embodied. Concepts are concepts because of their inferential capacity, their ability to be bound together in ways that yield inferences. According to Lakoff and Johnson, concepts are strongly embodied:

An embodied concept is a neural structure that is actually part of, or makes use of, the sensorimotor system of our brains. Much of conceptual inference is therefore, sensorimotor inference. (Lakoff & Johnson 1999, p.20)

This radical claim has enormous implications for physical education. It implies that reason, perception and motor control have the brain as the locus of all three functions as a quite natural operation of everyday living. What is taken to be real and how it is reasoned is inextricably linked. The categories of things in the world determine what
is taken to be real such as animals, people, buildings, bats and balls. The concepts emerging determine how a person reasons about the categories. Thus, in order to function realistically in the world, the categories formed must match the forms of reasoning about them in order for a person to function well enough to exist and work very well.

Lakoff and Johnson argue that mainstream Western philosophy is so drastically false that it distorts the understanding of what human beings are, what the mind and reason are, and what the human place in the universe is. A summary of the claims made by mainstream philosophy as identified by Lakoff and Johnson is presented in Figure 4.3.

<table>
<thead>
<tr>
<th>Distortions of Western philosophy with regards to the human image</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reality is divided into categories that exist independent of the specific properties of human minds, brains and bodies.</td>
</tr>
<tr>
<td>2. The world has a rational structure: The relationships among categories in the world are characterised by transcendent or universal reason, which is independent of any peculiarities of human minds, brains and bodies.</td>
</tr>
<tr>
<td>3. The concepts used by mind-, brain-, body-free reason correctly characterise the mind-, brain- and body-free categories of reality.</td>
</tr>
<tr>
<td>4. Human reason is the capacity of the human mind to use transcendent reason, or at least a portion of it. Human reason may be performed by the human brain, but the structure of human reason is defined by transcendent reason, independent of human bodies or brains. Thus, the structure of human reason is disembodied.</td>
</tr>
<tr>
<td>5. Human concepts are the concepts of transcendent reason. They are therefore defined independent of human brains or bodies, and so they too are disembodied.</td>
</tr>
<tr>
<td>6. Human concepts therefore characterise the objective categories of mind-, brain- and body-free reality. That is, the world has a unique, fixed category structure, and we all know it and use it when we are reasoning correctly.</td>
</tr>
<tr>
<td>7. What makes us essentially human is our capacity for disembodied reason.</td>
</tr>
<tr>
<td>8. Since transcendent reason is culture free, what makes us essentially human is not our capacity for culture or for interpersonal relations.</td>
</tr>
<tr>
<td>9. Since reason is disembodied, what makes us essentially human is not our relation to the material world. Our essential humanness has nothing to do with our connection to nature or to art or to music or anything of the senses.</td>
</tr>
</tbody>
</table>

Figure 4.3 Distortions of Western philosophy with regards to the human image. (Lakoff & Johnson 1999, pp.21 & 22)
They argue that much of mainstream Western philosophy explores variations of these themes drawing out consequences from the listed claims. Further, Lakoff and Johnson purport that these claims were not based on empirical evidence. Instead they emerged from a priori philosophy. In their view cognitive science calls this entire philosophical world view into serious question based on empirical grounds.

At the heart of their argument about world views are claims 4, 5 and 6 that human reason and human concepts are mind-, body- and brain-free and characterise objective, external reality. They argue that human concepts and human reason are body- and brain-dependent. They are shaped by the body and brain. Thus the body and brain are essential to humanity. In their strong view there is no reason to believe there is disembodied reason or that the world comes in neatly carved categories or that the categories of the mind are the categories of the world. Furthermore, they assert that if claims 4, 5 and 6 are empirically incorrect, a great deal of re-thinking about who human beings are and their place in the universe needs urgent attention.

The embodiment of reason via the sensorimotor system is of great importance to the basic philosophy and understanding of physical education. It is a crucial part of the explanation of the good match of concepts with the way humans function in the world. They fit so well because they have evolved from the sensorimotor systems that in turn evolved to enable humans to function in their physical environments. Thus the embodiment of mind leads to a philosophy of embodied realism.

This current study argues that concepts cannot be a direct reflection of external, objective, mind-free reality because the sensorimotor system plays a crucial role in shaping them. And importantly, the involvement of the sensorimotor system in the conceptual system keeps the conceptual system very much in touch with the world. It is for this reason that physical education should be regarded with a sense of new importance and value. Enriched stimulation of the sensorimotor system impacts on the concepts formed and the everyday reasoning of a person. Human motion that is stimulated by innovative programs and ideas, together with aspects of existing programs, can play a significant role in the future acquisition of essential learnings by students. These new learnings will be more in tune with the needs and times of a rapidly changing world, a world paradoxically characterised by disconnection with human motion through virtual means of learning, including any of the forms of

Toward a broader appreciation of human motion in education
emerging information and communication technologies (ICTs) widely promoted as providing new, efficient and effective environments for learning and advancement. In reality, unless the educational use of ICTs – or any other form of information dissemination – is not coupled with bodily and emotional interconnectedness, the process of reasoning and deeper understanding is unlikely to occur to its full potential.

4.1.3 Metaphorical thought and subjective experience

Metaphorical thought is another development that has implications for physical education. Human subjective and mental life are enormous in scope and richness. Subjective experiences such as desire, affection and achievement, as rich as they are, are reported by Lakoff and Johnson to be conceptualised, visualised and reasoned from other domains of experience. These are mostly sensorimotor domains. Examples of the actions of these sensorimotor domains are revealed in the metaphors chosen to express understanding or lack of it. When an idea is understood (a subjective experience), understanding is expressed in terms of grasping an object (a sensorimotor experience). Failing to grasp an idea is described as having it go right by or over one’s head. The cognitive mechanism for conceptualising in this way is termed a ‘conceptual metaphor’. The metaphor allows conventional mental imagery from sensorimotor domains to be used for domains of subjective experience (Lakoff & Johnson 1999).

Conceputal metaphor is pervasive in both thought and language. It is, indeed, difficult to think of a common subjective experience that is not conventionally conceptualised in terms of metaphor, and thinkers and scientists other than Lakoff and Johnson have pursued theories based on new scientific observations of how the human body and mind work in conjunction with one another. Following the lines of investigation of Christopher Johnson (1997), Joe Grady (1997), Srini Narayanan (1997) and Gilles Fauconnier & Mark Turner (1998), Lakoff and Johnson further developed their integrated theory of primary metaphors, which consists of four parts.

Part one is conflation, suggested by Christopher Johnson in 1997. In young children conflation is what occurs during the time when subjective experiences and judgements are regularly undifferentiated in experience. That is, they are conflated. The children do not distinguish between the two when they occur together. The child experiencing affection (a subjective experience) typically correlates that emotion with
the sensory experience of warmth from being held. Associations are automatically built up between the domains of emotion and sensorimotor experiences. Later in the process of differentiation, the children are able to separate out the domains but the cross-domain associations persist. These persisting domains are the mapping of conceptual metaphors that will lead to later life statements in the grown person who will speak of 'a warm smile', 'a big problem' or 'a close friend' (Lakoff & Johnson 1999).

The second part of the theory borrows from Grady, who argued in a 1997 publication that metaphors have a minimal structure and arise naturally, automatically and unconsciously through everyday experience by means of conflation, during which cross-domain associations are formed. From these primary metaphors, more complex metaphors are created by conceptual blending. In the early stages, universal early experiences lead to universal conflations, which in turn develop into widespread conventional conceptual metaphors. Primary metaphors combine to make up complex metaphors.

The third part of Lakoff and Johnson's theory uses aspects of Narayanan's 1997 theory of neural connections between domains. The neural connections involved in conflation enable associations between the conceptual domains. The key to the associations being formed is the simultaneous activation of the neural areas across the neural networks. These result in permanent connections within the substance of the brain.

In the final part of their theory, Lakoff and Johnson consider the conceptual blending that can occur when distinct conceptual domains are coactivated, as posited by Mark Turner and Gilles Fauconnier in 1998. Under certain conditions connections across the domains can be formed, leading to new inferences. The resulting conceptual blends can be either conventional or original. When two or more primary metaphors are brought together, larger complex metaphors emerge (Lakoff & Johnson 1999).

It is the integrated theory of primary metaphors that has great implication for physical education. Humans acquire a large system of primary metaphors automatically and
unconsciously by simply functioning in ordinary ways in the everyday world from the earliest years. There is no choice in this matter. It occurs because of the way that neural connections are formed during the period of conflation involving mostly the sensorimotor system.

As a result, a person naturally thinks of using countless numbers of primary metaphors. Several examples of primary metaphors are provided in Figure 4.4. Each states the primary metaphorical mapping, its subjective component distinguished from its sensorimotor component, and the primary experiences of domain conflation that gave rise to it.

<table>
<thead>
<tr>
<th>Primary Metaphors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Important is Big</strong></td>
</tr>
<tr>
<td>Subjective Judgement: Importance</td>
</tr>
<tr>
<td>Sensorimotor Domain: Size</td>
</tr>
<tr>
<td>Example: ‘Tomorrow is a big day’.</td>
</tr>
<tr>
<td>Primary Experience: As a child, finding that big things, eg parents, are important and can exert major forces on you and dominate your visual experience.</td>
</tr>
<tr>
<td><strong>Knowing is Seeing</strong></td>
</tr>
<tr>
<td>Subjective Judgement: Knowledge</td>
</tr>
<tr>
<td>Sensorimotor Domain: Vision</td>
</tr>
<tr>
<td>Example: ‘I see what you mean’</td>
</tr>
<tr>
<td>Primary Experience: Getting information through vision.</td>
</tr>
<tr>
<td><strong>Understanding is Grasping</strong></td>
</tr>
<tr>
<td>Subjective Judgement: Comprehension</td>
</tr>
<tr>
<td>Sensorimotor Domain: Object manipulation</td>
</tr>
<tr>
<td>Example: ‘I’ve never been able to grasp transfinite numbers’.</td>
</tr>
<tr>
<td>Primary Experience: Getting information about an object by grasping and manipulating it.</td>
</tr>
<tr>
<td><strong>Seeing is Touching</strong></td>
</tr>
<tr>
<td>Subjective Judgement: Visual perception</td>
</tr>
<tr>
<td>Sensorimotor Domain: Touch</td>
</tr>
<tr>
<td>Example: ‘She picked my face out of the crowd’.</td>
</tr>
<tr>
<td>Primary Experience: Correlation between the visual and tactile exploration of objects</td>
</tr>
</tbody>
</table>

Figure 4.4 Primary metaphors (Grady 1997)

Toward a broader appreciation of human motion in education
As stated earlier, primary metaphors are part of the cognitive unconscious. They are acquired automatically and unconsciously via the normal process of neural learning that includes sensorimotor processes, and the person may be completely unaware that they have them. There is no choice in the process. Therefore, when embodied experiences in the world are universal, then the corresponding primary metaphors are universally acquired. This explains the widespread occurrence of a great many common primary metaphors around the world. It is most important to note that universal metaphors are learned through experiences and are universals that are not innate. The concept of time as it is expressed around the globe is a universal metaphor and there are hundreds others (Lakoff & Johnson 1999).

In the normal everyday life of a human being, therefore, an enormous range of primary metaphors is created just by individuals going about in the world constantly moving and perceiving. Whenever a domain of subjective experience or judgement is coactivated regularly with a sensorimotor domain, permanent neural connections are established via synaptic weight changes. The connections, which have been unconsciously formed by the thousands, provide an inferential structure and qualitative experience activated in the sensorimotor system to the subjective domain with which they are associated. Thus it is inevitable that an enormous metaphoric conceptual system is built in the person (Lakoff & Johnson 1999).

A vast number of nonmetaphorical literal concepts exist as well, but compared with conceptual metaphors these are relatively impoverished. Examples are cup, grasp or in. Primary metaphors add sensorimotor inferential structure. According to Lakoff and Johnson, nonmetaphorical thought about subjective experience and judgement almost never happens:

We do not have a choice as to whether to acquire and use primary metaphors. Just by functioning normally in the world, we automatically and unconsciously acquire and use a vast number of such metaphors. Those metaphors are realised in our brains physically and are mostly beyond our control. They are a consequence of the nature of our brains, our bodies, and the world we inhabit. (Lakoff & Johnson 1999, p.59)
4.1.4 Complex metaphors

Complex everyday metaphors are built out of primary metaphors plus forms of commonplace knowledge, including cultural models, folk theories, or simply knowledge or beliefs widespread and accepted in a culture. A great many of them are stable, entrenched and conventionalised in a culture and form a huge part of the conceptual system of individuals to affect how they think and what they care about nearly every waking moment. The complex metaphor is built up out of primary metaphors as follows. See Figure 4.5.
<table>
<thead>
<tr>
<th>The Cultural Belief</th>
<th>People are supposed to have a purpose in life, and they are supposed to act so as to achieve those purposes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The primary metaphors</td>
<td>Purposes Are Destinations and Actions Are Motions</td>
</tr>
<tr>
<td>The metaphorical version of the cultural belief</td>
<td>People are supposed to have destinations in life, and they are supposed to move so as to reach those destinations.</td>
</tr>
<tr>
<td>This is combined with a simple fact</td>
<td>A long trip to a series of destinations is a journey.</td>
</tr>
</tbody>
</table>

Combined, they entail a complex metaphorical mapping:

- Journey → Purposeful Life
- Traveler → Person Living A Life
- Destinations → Life Goals
- Itinerary → Life Plan

The complex metaphor is made of four submetaphors and is a consequence of:
1. The cultural belief that everyone is supposed to have a purpose in life.
2. The primary metaphors Purposes Are Destinations and Action Is Motion.
3. The fact that a long trip is a series of destinations is a journey.

The full import of this metaphor arises through its entailments that are commonplace cultural knowledge about journeys.

- A journey requires planning a route to your destinations.
- Journeys may have obstacles, and you should try to anticipate them.
- You should provide yourself with what you need for the journey.

As a prudent traveler you should have an itinerary indicating where you are supposed to be at what times and where to go next. You should always know where you are and where you are going next.

The three submappings of the A Purposeful Life Is Journey metaphor turn the knowledge about travel into guidelines for life.

- A purposeful life requires planning a means for achieving your purposes.
- Purposeful lives may have difficulties, and you should try to anticipate them.
- You should provide yourself with what you need to pursue a purposeful life.

As a prudent person with life goals you should have an overall life plan indicating what goals you are supposed to achieve at what times and what goals to set out to achieve next. You should always know what you have achieved so far and what you are going to do next.

Figure 4.5 The complex metaphor A Purposeful Life Is a Journey
(Lakoff & Johnson 1999)

Toward a broader appreciation of human motion in education
The embodiment of thought is illustrated through this metaphor in a way that indicates the useful method of observing memory narratives of students participating in the current study.

Although the mappings are presented in a linear and orderly sequence, complex metaphors can be parallel or random. Complex metaphors can go beyond the conceptual and have consequences for the material culture. The complex conceptual metaphor A Purposeful Life Is A Journey defines the meaning of the important cultural document – the curriculum vitae (CV). The ‘course of life’ document provides a report of where an individual is in life in relation to achievements. Those who have come far (achieved a lot) in some cases are envied for they have shown they have gotten further much faster. The CV may reveal others who have not yet found direction in life. This metaphor is a very good example of a cultural metaphor and how it can affect the lives of its citizens everyday.

The most important of life’s abstract concepts are conceptualised using complex metaphors. These are built up out of primary metaphors embodied in three ways:

- They are embodied through bodily experience in the world, which pairs subjective experience with sensorimotor experience.
- The source-domain logic arises from the inferential structure of the sensorimotor system.
- They are instantiated neurally in the synaptic weights associated with neural connections. (Lakoff & Johnson 1999)

In addition, the metaphors are within the cognitive unconscious, which means that most of the time there is no direct access to them, or control over them.

Metaphors provide a methodology to observe the thinking and ways of thinking that have been developed in people as they go about their daily lives. They offer an insight into the development and understandings acquired by the students participating in the current study. An examination of metaphors will illuminate the effect of sensorimotor experiences in the lived experiences of the students and indicate where they acquire these in their ‘world of being’. Complex metaphors exemplify the three aspects of embodied reasoning that dispel any claims to existence lived in any other fashion, namely, cognitive unconscious, the embodiment of mind and metaphorical thought.

4.2 Emotion and reason

Another challenge to dualist ideologics comes from the neurologist Antonio Damasio whose research and theories target the dualism that splits the mind from the body. He
asserts that minds are embedded not only in brains but the rest of the body and is able to demonstrate from neurobiological research that conscious experiences come from brain states that are the product of the complete interconnection and interdependence of neural and physiological systems within the body. As such the involvement of emotions as an integral part of the decision-making process makes an important contribution to the understanding of how reason and feelings come together:

This is Descartes' Error: the abyssal separation between body and mind, between the sizeable, dimensioned, mechanically operated, infinitely divisible body stuff, on the one hand, and unsizable, undimensioned, un-pushpullable, nondivisible mind stuff; the suggestion that reasoning, and moral judgement, and the suffering that comes from physical pain or emotional upheaval might exist separately from the body. Specifically, the separation of the most refined operations of mind from the structure and operation of a biological organism. (Damasio 1994, pp.249 & 250)

Again, physical education (and education) is provided with a momentous opportunity to re-think philosophies and practices to improve the acquisition of knowledge, dispositions, attitudes and skills. From the work of Damasio a comprehensive understanding of the human mind 'requires an organismic perspective'.

...not only must the mind move from a nonphysical cogitum to the realm of biological tissue, but it must also be related to a whole organism possessed of integrated body proper and brain and fully interactive with a physical and social environment. (Damasio 1994, p.252)

Of particular interest to human motion in education (and physical education), is the understanding derived from the work of Damasio of the neural representation of existing or changing body states as images forming a landscape within the brain. It is irrelevant which sensory modalities the representations arrive from, as a response is elicited depending on the matching with known or unknown conditions. This response invoked is an emotion that becomes part of the reasoning process. What is experienced as a result of the response is a feeling (Damasio 1999).

The intricate interconnection provides an insight into the events set in motion when changes in body states occur. The new understanding of the total neural system and biological systems working together to produce images in the brain that evoke responses, emotions, decisions and feelings is important for comprehending the potential learning methodologies of the integrated person:
The truly embodied mind I envision, however, does not relinquish its most refined levels of operation, those constituting its soul and spirit. From my perspective, it is just that soul and spirit, with all their dignity and human scale, are now complex and unique states of an organism. (Damasio 1999, p.252)

In his latest work, Damasio demonstrates a new understanding of human consciousness by linking the body and emotion to unfold what it is to be human (Damasio 1999). Specifically, the theory and knowledge relating to emotion and feeling sets the context for the investigation of the working relationships within all of the biological and psychological systems within and external to the body.

The most significant aspect of Damasio’s work is his theory of the neurobiological mechanism that operates constantly and is continually evolving in light of experiences in the person’s ‘way of being’. Changes in the global body state, whether externally or from internal sources, are interpreted in the neural pathways within the cerebral cortex to evoke an emotion. According to Damasio, an individual is not necessarily aware of the emotion until it surfaces in their consciousness. When this occurs, a feeling is experienced. It is this feeling that enhances a person’s ability to respond adaptively and to their best advantage:

> Whether we like it or not, this is the natural human condition. But when consciousness is available, feelings have their maximum impact, and individuals are able to plan and reflect. They have a means to control the pervasive tyranny of emotion: it is called reason. Ironically, of course, the engines of reason still require emotion, which means that the controlling power of reason is often modest. (Damasio 1999, p.58)

Changes in the global body state are usually initiated in two ways. Firstly, an object or situation is processed through one of the body’s sensory devices, such as seeing the face of a favourite teacher. On the other hand, objects and situations can be conjured from the memory and represented in the thought processes, such as remembering the face of the least favourite teacher.

The act of moving in itself produces changes in the global body state through, for example, the contraction of muscle spindles, seeing something new, passing through smells or touching surfaces of different textures. Each sensory experience invokes a response, an emotion that is ‘felt as a feeling’ (pleasant or otherwise) to be part of the decision-making process to reason the current state of ‘being in the world’ and how to proceed. These processes occur continuously and become known and stored in the memory to be incorporated in future planing and reflecting, to be inextricably involved in the process of reasoning.

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Toward a broader appreciation of human motion in education
Physical education is pivotal for stimulating a great variety of movement experiences (acts of human motion) that initiate the neurobiological mechanism and processes as outlined. They are very much a part of the reasoning development of a person – crucial for the act of learning and gaining new understandings. This realisation prompts the use of as much human motion as possible in the learning process to receive the richness of the sensory information that can come in as input to decision-making, problem-solving and reasoning in the development of new understandings.

Intuitively good teachers use this linkage to enhance the process of learning in their students. Exemplary practices can be found in small pockets throughout schools, but it is certainly not widespread. One example of exemplary practice is the teaching of Carla Hannaford, a neurophysiologist and educator working with learners of all ages from the gifted to the learning-disabled using her program called Smart moves: Why learning is not all in your head:

We have attempted to explain the mind from the glimpses and pieces we are able to put together as we focus our attention and research on the brain. But we have missed a most fundamental and mysterious aspect of the mind: learning, thought, creatively and intelligence are not processes of the brain alone, but of the whole body. Sensations, movements, emotions and brain integrative functions are grounded in the body. The human qualities we associate with the mind can never exist separate from the body. (Hannaford 1995, p.11)

Because of the significant involvement of emotion in the process of decision making, researchers have attempted to establish if any functional abilities exist that impact on associated feelings that in turn influence reasoning. Peter Salovey, John Mayer and David Caruso have been able to establish that abilities do exist as what they term ‘emotional intelligence’. Their work is examined in the following section because their conceptualisation enables the level of emotional development in a person to be assessed and used to understand the link between emotions, reasoning and human motion – a characteristic of the integrated person.

4.2.1 Emotional competencies and reason

Until 1990 the concept of emotional intelligence was not recognised seriously as a form of human intelligence. An unknown ‘intelligence’ was continually referred to in widespread studies that included brain research, biological psychology, aesthetics, artificial intelligence, measurement of intelligence and clinical psychology (Salovey 1989).
Peter Salovey of Yale University and John Mayer of the University of New Hampshire in a landmark paper (Salovey 1990) gathered all of the references to this ‘intelligence’ to distil the essentials of the phenomenon. Their work pioneered the way for an exciting new conceptualisation of the knowledge and skills involved in emotional intelligence that set it apart from concepts of traditional intelligence.

The first definition of the concept of emotional intelligence was phrased and the emotional competencies involved were described. They posited that in life’s tasks, thinking included affective information and that affective information may well be processed in ways different to cognitive information. They also proposed that individual differences exist in the competencies to process the affective information.

Salovey and Mayer founded and phrased the concept of emotional intelligence by defining it as:

....the ability to monitor one's own and other's feelings and emotions, to discriminate among them and use this information to guide one's thinking and actions.(Salovey & Mayer 1990, p. 189)

Through further research and refining of the original concept, Mayer and Salovey restated their definition of emotional intelligence as involving:

...the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotion and intellectual growth. (Mayer & Salovey 1997, p.10)

They developed a ‘4 x 4’ model of emotional intelligence as illustrated in Figure 4.6 composed of four emotional abilities increasing in psychological complexity vertically and level of development horizontally. Movement toward the top right position of the model indicates the highest level of development of emotional competencies achieved by an individual.

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Toward a broader appreciation of human motion in education
<table>
<thead>
<tr>
<th>Managing Emotions</th>
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<tbody>
<tr>
<td>Ability to stay open to feelings, both those that are pleasant and those that are unpleasant.</td>
</tr>
<tr>
<td>Ability to reflectively engage or detach from an emotion depending upon its judged informativeness or utility.</td>
</tr>
<tr>
<td>Ability to reflectively monitor emotions in relation to oneself and others such as recognizing how clear, typical, influential, or reasonable they are.</td>
</tr>
<tr>
<td>Ability to manage emotion in oneself and others by moderating negative emotions and enhancing pleasant ones, without repressing or exaggerating information they may convey.</td>
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<thead>
<tr>
<th>Understanding Emotions</th>
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<tr>
<td>Ability to label emotions and recognise relations among the words and the emotions themselves, such as the relation between liking and loving.</td>
</tr>
<tr>
<td>Ability to interpret the meanings that emotions convey regarding relationships, such as that sadness often accompanies loss.</td>
</tr>
<tr>
<td>Ability to understand complex feelings; simultaneous feelings of love and hate, or blends such as awe as a combination of fear and surprise.</td>
</tr>
<tr>
<td>Ability to recognise likely transitions among emotions, such as the transition from anger to satisfaction, or from anger to shame.</td>
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<tr>
<th>Using Emotions</th>
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<tr>
<td>Emotions prioritise thinking by directing attention to important information.</td>
</tr>
<tr>
<td>Emotions are sufficiently vivid and available that they can be generated as aids to judgement and memory concerning feelings.</td>
</tr>
<tr>
<td>Emotional mood swings change the individual's perspective from optimistic to pessimistic, encouraging consideration of multiple points of view.</td>
</tr>
<tr>
<td>Emotional states differentially encourage specific problem approaches, such as when happiness facilitates inductive reasoning and creativity.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Identifying Emotions</th>
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</thead>
<tbody>
<tr>
<td>Ability to identify emotion in one's physical states, feelings and thoughts.</td>
</tr>
<tr>
<td>Ability to identify emotions in other people, designs, artwork, etc, through languages, sound, appearance and behaviour.</td>
</tr>
<tr>
<td>Ability to express emotions accurately, and to express needs related to those feelings.</td>
</tr>
<tr>
<td>Ability to discriminate between accurate and inaccurate or honest versus dishonest expressions of feeling.</td>
</tr>
</tbody>
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**Figure 4.6 Competency-based model of emotional intelligence (Mayo & Salovey 1997, p.11)**

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**Toward a broader appreciation of human motion in education**
Because of the impact of emotions on reasoning, the way in which an individual deals with their emotions through emotional competencies is significant. The feelings generated by emotions are part of the process of decision making and problem solving as discussed earlier. It therefore follows that a closer examination of the nature of these competencies and their influence on an individual’s ability to reason about the world around them becomes crucial in the investigation of the ‘integrated person’. An understanding of emotional intelligence contributes a greater understanding of the key operations in the functioning human organism.

Individuals with high emotional competencies understand what they are feeling and can communicate those feelings in words and expressions. Moreover, they understand the feelings of other people, both in their words and in their expressions. They feel the emotions of other people and empathise easily with them. They are able to regulate their emotions to adapt to the task or situation at hand. They have learned to regulate the emotions of other people and, for example, can cheer them up when needed or engage others when they need to be heard.

They can use emotions to get a multiple perspective in problem solving, to be creative, motivated and sustained in their actions. As a result, they have attained a level of positive mental health. They are often a pleasure to be around and leave others feeling better as they tend to emotions in the path toward growth (Salovey & Mayer 1990). However, they can self-regulate in their dealings with others in the understanding that temporarily hurt feelings or emotional restraint may be necessary in the service of a greater objective. They know that to help others in the long run often requires sacrifice and emotional toughness.

On the other hand, individuals with deficits in emotional competencies may experience problems in adjustment to tasks or situations in life. If they are unable to regulate their own emotions they may become slaves to them. If they cannot recognise emotions in others they often make them feel bad and can be perceived as cloddish or oafish, which leads ultimately to ostracism. A common ailment arising from a decrement in emotional intelligence occurs when individuals cannot recognise emotion in themselves and therefore often fail to plan and live lives that fulfill them.
emotionally. Unfortunately the consequences of such a deficit may be a life of unrewarding experiences leading possibly to depression and even suicide (Skinner 1986).

Individual differences in emotional competencies provides part of the reason why some individuals are successful and some are not so successful in a range of life’s tasks. Those individuals with a low level of competencies can build their capacity by learning emotional knowledge (Greenberg, Kusche, Cook, & Quamma 1995; Elias 1997). The more knowledge about emotions that an individual has, the better they may perform through the emotion-feelings-reasoning processes. This knowledge can come in various ways, including experiencing emotions through doing activities that incorporate encounters with others and themselves in dealing with issues and challenges to achieve goals.

In this regard, involvement in sport and other physical recreation pursuits provides a rich range of emotions at varying levels of intensity. Learning about the emotions, what they feel like and how to deal with them builds emotion knowledge that influences feelings intimately involved in the process of reasoning. Involvement in a wide range of physical activities provides the opportunity to practice the management of emotions, such as overcoming the challenge (fear) of abseiling a rock face. Experiencing this fear and overcoming it enables a more confident approach to other situations that present a fear.

Involvement in physical activities involves emotional reactions, learning about the management of those reactions and applying them to other situations. Externalising these experiences through either verbal or written narratives enables individuals to make meaning from these experiences to further their ‘self’ understanding. Physical education provides these unique opportunities for meaningful lifelong learning and application to everyday life situations— an essential aspect of the education process.

Those individuals with high levels of emotional competencies are in a good position to possibly enhance them by involvement in physical activities to acquire more knowledge and continually practice emotional reasoning. However, those low in emotional competencies could possibly benefit greatly by acquiring more knowledge about their own and others’ emotions when experiencing human movement in its varying forms.
The linkage of emotions to reasoning is an important understanding as emotions come from the embodiment of a person and are influenced by bodily actions. As such, moving around in the world provides countless encounters physically, socially, and ecologically that all develop a response as a feeling. Physical education nurtures the confidence to explore varied ways to actually move around with confidence in the world, thus enriching a person’s reasoning capacities.

4.3 The rebuttal

Traditional Western philosophy of what constitutes mind and body is being challenged by discoveries, observations and new philosophical arguments and interpretations of human behaviour. In challenging traditional beliefs, these new ideas are making it possible to see physical education in a different light. Opportunities are being created for reversing the devastating influence the culture of dualism has had on the structure and teaching of physical education and on the way physical education is defined and regarded by practitioners and others.

This chapter has examined the discourse of humans existing as disembodied minds and demonstrated how such beliefs have marginalised bodily experiences in human reasoning (including such endeavours as education policy and practice) simply because the importance of physical experiences to the development of the whole person has not been fully appreciated and understood. The chapter has ended with a discussion of new interpretations of the relationship between mind and body that argue that the human body is not, and could not be, only a vessel for a disembodied mind; that human beings have at their core a body of flesh, blood, and sinew, hormone, cell and synapse that, together with all the things encountered in everyday life, make each individual the person he/she is.

To complete the argument that Western culture has inherited a significantly false philosophical view of what a person is, the following comparison between a dualist and monist view of a person is made. It brings together the theories discussed from psychology, neuroscience and cognitive science in a summary developed by Lakoff and Johnson (1999) that places the dualist and monist discourses into opposing views of what a person is, and how they function (Figure 4.7).
**The Traditional Western Conception of the Person**

<table>
<thead>
<tr>
<th>Disembodied Reason</th>
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<tbody>
<tr>
<td><strong>The Objective World</strong>: The world has a unique category structure independent of minds, bodies, or brains of human beings.</td>
</tr>
<tr>
<td><strong>Universal Reason</strong>: There is a Universal Reason that characterises the rational structure of the world. It uses universal concepts that characterise the objective categories of the world. Both concepts and reason are independent of minds, bodies, and brains of human beings.</td>
</tr>
<tr>
<td><strong>Disembodied Human Reason</strong>: Human reason is the capacity of the human mind to use some portion of Universal Reason. Reasoning may be performed by the human brain, but its structure is defined by Universal Reason, independent of human bodies or brains. Human reason is therefore disembodied reason.</td>
</tr>
<tr>
<td><strong>Objective Knowledge</strong>: We can have knowledge of the world via the use of Universal Reason and universal concepts.</td>
</tr>
<tr>
<td><strong>Human Nature</strong>: The essence of human beings, that which separates us from animals, is the ability to see Universal Reason.</td>
</tr>
<tr>
<td><strong>Faculty Psychology</strong>: Since human reason is disembodied, it is separate from and independent of all bodily capacities; perception, bodily movement, feelings, emotions, and so on.</td>
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</table>

Figure 4.7 The traditional Western conception of the person. (Lakoff & Johnson 1999, pp. 553-554)

...This view of a person is assumed in much of Western religion. Central to Judeo-Christian tradition is the view that Universal Reason is God’s Reason, which human beings have the capacity to choose to be involved in. The locus of consciousness and reason is identified with the soul. Since the soul is separate from the body and not subject to physical constraints, it is seen to be able to live on after the body has ceased to function; thus it is immortal.

This view of a person also lies behind the traditional Western distinction between the natural sciences and humanities. What is subject to physical law can be studied scientifically – the physical world, including physiology and biology. But, being radically free and not subject to the laws of physical causation, the mind is not seen as amenable to scientific study. A different ‘interpretive’ methodology is posited for ‘human sciences’ scientific endeavours.
Such traditional Western views of the person are completely at odds with the developing understandings from psychology, neuroscience and cognitive science. In reality, a human being has neither a separation of mind and body, nor Universal Reason, nor an exclusively literal conceptual system (Figure 4.8).

<table>
<thead>
<tr>
<th>The Concept of an Embodied Person</th>
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<tbody>
<tr>
<td><strong>Embodied Reason</strong></td>
</tr>
<tr>
<td>• <strong>Embodied Concepts</strong>: Our conceptual system is grounded in, neurally makes use of, and is crucially shaped by our perceptual and motor systems.</td>
</tr>
<tr>
<td>• <strong>Conceptualisation Only Through the Body</strong>: We can only form concepts through the body. Therefore, every understanding that we can have of the world, others and ourselves can only be framed in terms of concepts shaped by our bodies.</td>
</tr>
<tr>
<td>• <strong>Basic-Level Concepts</strong>: These concepts are our perceptual, imaging, and motor systems to characterise our optimal functioning in everyday life. This is the level at which we are maximally in touch with the reality of our environments.</td>
</tr>
<tr>
<td>• <strong>Embodied Reason</strong>: Major forms of rational inference are sensorimotor inference.</td>
</tr>
<tr>
<td>• <strong>Embodied Truth and Knowledge</strong>: Because our ideas are framed in terms of our unconscious embodied conceptual systems, truth and knowledge depend on embodied understanding.</td>
</tr>
<tr>
<td>• <strong>Embodied Mind</strong>: Because concepts and reason both derive from, and make use of, the sensorimotor system, the mind is not separate from or independent of the body. Therefore, classical faculty psychology is incorrect.</td>
</tr>
</tbody>
</table>

Figure 4.8 The concept of an embodied person. (Lakoff & Johnson 1999, p.555)

The heritage of Descartes' views regarding the separateness of mind and body has been dominant in Western thought for the past three centuries. While changes in philosophy relating to the nature of a person began in the 1950s, their penetration of physical education and education has been limited. The dualistic conception of a person is, it seems, the view held implicitly by many scholars and professionals at all levels in both physical education and education. The current study argues that lack of serious scholarly scrutiny has allowed this view to prevail for too long to the detriment of physical education. According to physical education philosopher Saul Ross, the acceptance of the Cartesian view rules out physical education as an
educational endeavour whether it is education conceived as education of or as education through the physical:

Much of the criticism of physical education – the body cannot be educated and mental education is more important than bodily education or bodily improvement – emerges from an implicitly held dualistic conception of a person. When such criticisms are voiced physical educators need to analyse the statements made to determine if a dualistic conception of a person is implicit in the comments. Where analysis confirms the implicitly held belief a rebuttal is now available: where a dualistic conception of a person is the accepted view neither physical education nor education is possible... (Ross 2001, p.105)

4.4 Concluding comments

A way ahead for the profession is to better understand the embodied mind, which has been the intent of this chapter. The appreciation of new ideas, concepts and philosophies and new understandings of the relationship between mind and body will enable better management of physical education so that human movement can become valued for the contribution it makes to the development and education of the whole person.

To strengthen the identity and broaden the concept of physical education to be more effective and educationally sustainable, it seems that the absurd notion of the disembodied mind needs to be left behind. There is a need to explore the implications and possibilities of thinking about people as being integrated beings connected to other beings, in turn linked to larger communities and settings. Fitzclarence provides further insight into this conceptualisation and provokes thinking about how the body is theorised and experienced in the world.

What is required is a more direct connection between the biological/physical and intellectual spheres of activity. (Fitzclarence 1990, p.107)

A person as a unitary being, where mind and body are integrated, has been the most difficult conception to elaborate in Western thought. The implications and consequences for being (and for physical education) based on this conceptualisation are only just beginning to be explored. A major purpose of the current study has been
to contribute to such a broadened conceptualisation of physical education. Current cognitive research and fresh philosophical ideas provide a tremendous opportunity to improve the understanding and experiences of human motion in the development of attitudes, skills, understandings and dispositions vital for essential learnings so that individuals can successfully participate in a rapidly changing world.

The following chapter on the research process used in the current study focuses on gaining an insight into the way students experience their everyday lives. It outlines the research project that seeks to gain an insight through a study of participating students' written memory narratives, of the integrated way in which individual’s learn and develop understandings linking their cultural, ecological and biological selves. The intent of the study of the memory narratives is to explore and confirm the inherent value of human motion to the individual, contextualised within the understanding of an individual as an organism with an embodied mind.

It will describe a broader educational paradigm for human motion in education and its crucial role in the acquisition of essential learnings, holistic homeostasis, and ecological and social connectedness in students. In this regard, it is proposed that physical education has a significant role to play in the process of human development and the educational processes that enhance that development.

The rebuttal of the pervasiveness of the cultural ideology of mind-body separation provides a way ahead for education to connect with the real and fundamental importance of human bodily experiences.
The research process

What about those moments, rare though they may be, when we have cut through the confusion of our many warring impulses and reached some existential understanding of ourselves, when we have momentarily grasped the ring of who we are and will become? (Singer & Salovey 1993, p.194)

5.1 An interpretive study

This dissertation is the report of an interpretive inquiry. The research questions driving this study were about the ideas and events, within and outside physical education, that lie behind the learning area’s failure to play a major role in Australian society as evidenced in the Australian school system, and how this might be overcome. The key research question was: What are the reasons behind the failure of physical education to sustain its identity and value in Australian society? The sub-questions were:

1. How do these causes manifest themselves to compromise physical education?

2. How can the situation be better managed to increase the sustainability and broaden the paradigm for physical education?

The motivation for this study was dissatisfaction with the current state of the physical education profession and my part in that situation. Qualitative methodology and methods were used to gather and then analyse data. To generate data to assist in answering the research questions, student volunteers were recruited to write memory narratives about physical experiences. They wrote these in periods of time set aside by their schools. Both the school principal and the students’ parents or carers gave informed consent.

The inclusion in this dissertation of various events in my life placed my own beliefs and practices under scrutiny; and as a qualitative researcher I have had to face the consequences of my own philosophy and actions in the field of physical education. The previously offered "narrative of self" involving a scene from my life served as a template for inviting students to share the way in which they see the world and themselves.
In gathering and analysing the data, I remained aware that there is no open window into the inner life of another individual. Moreover, research such as that presented in this current study is inevitably underpinned by epistemological positions, values and pre-understandings or biases. Cunningham, for instance, has argued that ‘biases’ are better considered as ‘pre-understandings’ that are essential ‘starting points’, that are ‘put at risk, tested and modified through the interface between the pre-understandings and the actions they are trying to understand’ (Cunningham 1999, p.317). By being conscious of and declaring the set of biases that are brought to the research situation, they are less likely to limit the research in unexamined or unexplained ways (Fine & Vanderslice 1992, cited in Herbert 2001, p.105).

While gathering the data and compiling the interpretations, I consciously considered the pre-understandings, positions, and values I brought to these activities, aware that interpretation is always filtered through the lenses of, among other things, language, gender, race, ethnicity, social class and cultural context, as there are no objective observations. There are only those that are socially located in the worlds of and between the researcher and the researched. Further, participants are seldom able to give absolute explanations of themselves and their actions. They can only offer partial accounts or written memories of what they did and why. In this regard, no single method of inquiry is able to grasp all of the subtleties and nuances that reflect our everyday lived experiences:

We are all creatures of our own social and cultural pasts. However, in order to be meaningful to others, the uniqueness of our own research experience gains significance when it is related to the theories of our predecessors and the research of our contemporaries. Ethnographers can find social and cultural understanding only if they are aware of the sources of the ideas that motivate them and are willing to confront them – with all that such a confrontation entails. (Vidich & Lyman 2000, p.62)

There can be no single true or valid interpretation of meaning. However, there can be more or less useful, ethical, liberating, fulfilling and rewarding interpretations, depending on the individual and their circumstances and purposes. (Herbert 2001, p.106)
As a consequence, this investigation uses interconnected interpretive methods that will be outlined in the next sections in order to gain meaning from each participant’s subjective self-reported life experiences.

The current study aimed to better understand the function of human motion for individuals during the processes of their education and socialisation, while examining why emphasis on human motion has diminished as part of school curricula and how that diminution might be reversed. Data were gathered and scrutinised against the backdrop of opposing cultural ideologies concerning the very nature of human beings – dualism and monism.

Both dualism and monism are old and well-debated interpretations of the mind-body relationship. Dualism, however – the idea that mind and body are separate entities and that reason exists outside the confines of the corporeal – has dominated Western philosophy since the late 18th century. Monism has been far less understood or promoted, but the belief in a mind-body integrated existence has been reinforced by recent scientific discoveries that offer tangible proof of this integration.

Physical education, the study of human motion and experiences, still labours under the influences and limitations imposed by the ascendancy of dualism. When mind and body are regarded as separate entities, one can be privileged – as is the mind – and the other sidelined in school curricula; and no significance is attached to this arrangement. If, on the other hand, the integration of mind and body is championed, there is created an opportunity for a new appreciation of the involvement of human motion in the educative process. However, the lack of awareness of the importance of this new insight remains a significant reason for the failure of educators to acquire a deeper understanding of physical education and what it offers the individual.

The collection and interpretation of written stories from participating students provided a method for developing a better understanding of the important underlying processes that enable individuals to acquire understandings and self-knowledge in their everyday lives. The methodology sought to provide insight into the inextricable relationship between human motion and reasoning that would assist the deeper understanding of human motion in education and, in turn, help define the nature and meaning of physical education.
The current study's focus was the investigation of how students perceived their own actions and how these perceptions reinforced the concept of an integrated being. If integration of mind and body could be detected in the data, the insights gained would assist the formulation of responses to the research questions, particularly the second sub-question that seeks to find understandings that will assist in formulating strategies for increasing the sustainability and broadening the paradigm for human motion in education.

The remainder of this chapter outlines the phases of the research project. Passage through these phases allows a greater insight into the importance of human motion in the thoughts and actions and spirits of the participating students. The new insights will be recruited to support the case for a broader understanding and a greater acknowledgement and practice of physical education in schools.

My purpose and role were very clear. As researcher, I would establish contact with schools, parents and participant students, collect evidence from the students and scrutinise the information for interrelationships between motion, emotion and reasoning.

5.2 Moral considerations and ethics

Considerations regarding ethics and morals in relation to the current study reflect the influences of the ideologies of the Enlightenment. A brief summary of them indicates their significance in the context of this inquiry.

5.2.1 Pervasive autonomy

Foremost among these considerations are the dichotomies of fact-value, subject-object and material-spiritual dualisms from the Enlightenment ideologies acting in modern Western cultures. One deeply influential force is what Christians called 'a pervasive autonomy':

> Human beings were declared a law unto themselves, set loose from every faith that claimed their allegiance. Proudly self-conscious of human autonomy, the 18th-century mind saw nature as an arena of limitless possibilities in which the sovereignty of human personality was demonstrated by its mastery over the natural order.
Release from nature spawned autonomous individuals who considered themselves independent of any authority. The freedom motif was the deepest driving force, first released by the Renaissance and achieving maturity during the Enlightenment. (Christians 2000, p.133)

Discoveries and developments in the natural sciences of mathematics, physics and astronomy enabled humans to dominate nature rather than be dominated by it.

**The development of morality.** The legacy of the Enlightenment’s doctrine of autonomy places individual self-determination centre stage, creating the universal problem of integrating human freedom with moral order. Functional human society requires at least a minimal moral commitment to the common good from it members, a moral commitment that constitutes the self-in-relation to others in that community. What is most important is that moral duty and commitment are nurtured by the demands of social linkage and not produced by abstract theories. Thus, communities’ common morality is what Denzin (2000) describes as ‘pre-theoretical agreement.’ In other words, morality within a group results from arrangements within the group and not on theoretical rules that have arisen from the abstract musings of others.

According to Bok moral obligations are the results of articulation among individuals within the fallible and irresolute voices of everyday living:

> What counts as common morality is not only imprecise but variable... and a difficult practical problem. (Bok 1995, p.99, cited in Denzin 2000, p.147)

Morality is worked out among individuals and others in their respective communities; and the process of moral development stems from a fundamental concern about what is best for the individual and how they ought to live in relation to justice, fairness, compassion, virtue, tolerance, freedom, and rights.

According to Lakoff and Johnson the development of morality is bound up with human well being, with virtually all of an individual’s abstract moral concepts structured by metaphors grounded in the experiences of the body:

> These metaphors are grounded in the nature of our bodies and social interactions, and they are thus anything but arbitrary and unconstrained. They all appear to be grounded in our various experiences of well being, especially physical well being. (Lakoff & Johnson 1999, p.290)
For example, people think it is better to be healthy rather than being sick, strong rather than weak, in control rather than out of control or dominated by others, to seek freedom rather than slavery, and to be upright and balanced, rather than being off balance or unable to stand. Thus, basic notions of what constitutes fundamental well-being forms the grounding for systems of moral metaphors around the world.

Understanding morality in this way enabled the current study to observe the influence of mind-body dualism – or monism – while analysing data on moral development provided in the study participants’ memory narratives. Observations of the individual moral development in the memory narratives could be made and discussed within the context of the above description in relation to the students existing as integrated totally functioning beings. That is, moral development is entirely individual according to unique circumstances.

5.2.2 The ethics of human research

Four guidelines common to the social science codes of ethics were followed in the course of the current study:

1. Informed consent was obtained from school principals and the parents of participating students. An initial meeting about the nature and consequences of the study was held with the school principals. With their written consent, a letter providing information about the study was sent to the parents or carers of identified enthusiastic students. The letter included a consent form to be signed by the parents if they agreed to their children taking part in the study. (See Appendices 1-5.) The students voluntarily became involved in the writing of the memory narratives in a period of time set aside by the school.

2. The research was designed to be free from active deception in representing the purpose and outcomes of the individual studies. The intent to scrutinise written memory narratives for the purpose of identifying any underlying connections between human motion and reasoning was made explicit to parents, principals, students and class teachers in written information that outlined the details of the project (Appendices 6 and 7).
Each student was enthusiastic about the study, as were their parents. School principals and teachers were also enthusiastic because of the possibilities for understanding more about the underlying functioning and modes of learning in their students. Each of the participating schools will receive a follow-up meeting to discuss the general findings and the possible implications for the learning programs at their sites.

3. Privacy and confidentiality were, and continue to be, ensured by concealing personal data behind a shield of anonymity. Immediately the data was obtained and formatted, all names and any other identifying information revealed in the memories, such as friends’ names, was coded into pseudonyms for use throughout this dissertation and any future publications. The original data remains stored in a locked filing cabinet at the University of South Australia, and will remain there for seven years, for personal reference only.

4. Accuracy in the data was paramount at all times to guard against any fabrications, omissions or contrivances during the project.

Ethical approval was sought and granted for the research project from the Deakin University Human Research Ethics Committee (Appendix 1) that incorporates the National Statement on Ethical Conduct in Research Involving Humans (1999) in their deliberations and permission processes. Ethical approval was also sought and granted to conduct the research project in South Australian schools by the Department of Education, Training and Employment’s (DETE) Human Research and Ethics Committee (Appendix 2).

5.3 The research interpretive paradigm

The purpose of this inquiry was to find out why human motion is not more valued, acknowledged and utilised in the life and learning of a student. A variety of reasons for the failure of physical education to occupy a more prominent place in educational curricula have been noted, including the fragmentation of the physical education profession into areas of specialisation; and the privileging of the intellect over the body, a cultural notion that has not been effectively refuted by physical education practitioners.
The belief in the separation of the mind and body continues to stymie the development of innovative physical education programs that can contribute to every aspect of school curricula. Emergent research knowledge, however, drawn mainly from the work of Lakoff and Johnson (1999), Damasio (1994), and Mayer and Salovey (1997) offers new impetus to the idea that mind and body are an integrated, single, functioning entity, as expressed in the concept of monism.

With this pre-understanding acknowledged, the current study set out to collect and analyse data that would demonstrate the underlying monist nature of students attending schools. The study sought to illuminate how individuals function as reasoning monists, exposing the deeper cognitive operations that constantly occur and are inextricably connected with human motion and emotions.

A set of three ‘lenses’, evolving from the theories described in Chapter 4, were used to investigate the empirical evidence collected from the participating students. The lenses provided a methodology for achieving insight into interconnected aspects of monistic student functioning. The three lenses of bodily experiences and reasoning, emotions and reasoning and the embodied mind are described in the following sections.

5.3.1 Bodily experiences and reasoning

Lakoff and Johnson’s (1999) theory regarding the central role played by perceptual and sensory-motor systems in shaping concepts such as self, provided the basis on which the formation of conceptual structures within the participating students could be investigated. Their work in cognitive science indicates that human concepts and human reason are brain and body dependent and that conceptual developments within an individual rely on human motion and cognitive assimilation and are expressed as conceptual metaphors.

These metaphors are numerous and exist in primary or complex forms. Lakoff and Johnson assert that humans have no choice in the matter of acquiring countless metaphors due to the neuronal connections within the body, including the brain, that are constantly stimulated and mostly unconscious as a person functions normally to move about in ‘their world of being’ (Lakoff & Johnson 1999).
It was anticipated that an analysis of the conceptual metaphors expressed by the students in their written memories would expose interrelationships between bodily actions, emotions and thinking. Lived bodily experiences and developed concepts such as self, others and their ecological circumstances would be evident in the narratives.

The conceptual metaphors used by the participating students would provide a methodological lens for observing how ways of thinking developed from lived experiences. Metaphors evident in their written expression would reveal the involvement of sensorimotor experiences in the everyday lives of the students and assist in identifying where and how these may have been generated.

Thus the lens of bodily experiences and reasoning could be expected to locate conceptual metaphors growing out of the integration of bodily experiences and reasoning. It was, therefore, a major tool in the investigation of the data generated from the written memories of the participating students. It was intended that through this tool deeper insights into the interrelationships between bodily experiences and human concept formation, such as ideas about the self, the self and others and the moral self, would be revealed.

5.3.2 Emotions and reasoning

The influence of feelings on emotions and reasoning derived from the work of Damasio (1999) provided the basis for another type of lens through which to interpret the lived experiences of the participating students and their effect on cognition. His theories regarding changes in the global body state provided another point of observation of the data elicited from the students.

According to Damasio a person is composed of a complex synergistic working relationship between psycho- and bio-systems within and external to the body. Stimulation from either external or internal sources evokes emotions that stimulate the experience of a feeling that in turn permeates the thought processes. Feelings control the powerful emotions and enable individuals to use reason to determine the best course of behaviour. In the context of the current study, observation of the influence of feelings on decisions and ways of thinking as expressed in the writing of the participating students would be an indication of integrated functioning.
The work of Salovey et al. (2000) regarding emotional intelligence and emotional competencies provided another complementary point of observation of the students. It was anticipated that their writing would reveal the significant impact of emotions and feelings on reasoning, and that individuals vary in their abilities to deal with their emotions and decision making.

5.3.3 The embodied mind

A final lens was derived from a combination of all of the theories described in Chapter 4 to illuminate the interconnections between reason, bodily experiences and feelings evident in the students. This lens has as its basis the reality that the architecture of the brain's neural networks permeates every part of the body to be inextricably involved in whatever concepts a student may acquire and whatever kind of reasoning he or she undertakes. The lens focuses on the total integration of bodily actions, feelings and thinking in the participating students' lived experiences and provides a further way to expose the monist nature of an individual's functioning and operations.

5.3.4 The hermeneutic circle methodology

The ways in which individuals make sense of their experiences and report their feelings, thinking and actions are constitutive of their experiences (Giddens 1993). The students reported on an important event in their lived experiences with vivid emotions and feelings while describing what happened to them.

In attempting to make sense of the information reported by the students, hermeneutic circle methodology was used to reconstruct the self-understandings of the students of their everyday lives. To grasp the meaning of human actions in the development of self-understanding in the students, it was important to empathise and visualise the situation or context in which the actions took place. This is the methodology of the hermeneutic circle. In order to understand the significance of a part (specific sentence or action reported by the students), it must be placed in the context of the purpose of the inquiry (the complex of mind-body integration beliefs and associated integrated education entailments), and vice versa.
The methodology of the hermeneutic circle involves:

...a continuous dialectical tacking between the most local of local detail and the most global of global structure in such a way as to bring both into view simultaneously.... (Geertz 1979, cited in Denzin 2000, p.193)

Garfinkel provides great clarity in a further explanation of the hermeneutic circle methodology needed to understand how the students made sense of their worlds:

Not only is the underlying pattern derived from its individual documentary evidences, but the individual documentary evidences, in their turn, are interpreted on the basis of 'what is known' about the underlying pattern. Each is used to elaborate the other. (Garfinkel 1967, cited in Denzin 2000, p.193)

5.4 The research strategy

The research strategy that was chosen to best gather information about the monistic nature and lived experiences of participating students was autoethnography. It is a narrative of self:

in which an author takes the reader back to a corner of the author's own life in the field that was unusually vivid, full of effect or framed by unique events (Tedlock, cited in Denzin 2000, p.460).

Autoethnography has grown in popularity among the social sciences in recent years as an extension of autobiography (Stanley 1993). The narrative of the self is described by Richardson as:

...an evocative form of writing that produces highly personalised and revealing texts in which authors tell stories about their own lived experiences. Dramatic recall, strong metaphors, vivid characters, unusual phrasings, and the holding back on interpretation invite the reader to emotionally relive the events with the author. (Richardson 1994, cited in Sparkes 2002, p.73)

Autoethnography was chosen as a means of enabling participating students to recall an important event in their lives and describe it in detail. It enables a deeper understanding of what they were doing, what happened, how they felt, what decisions they made, who they were with and so on. It was anticipated that reports from the students would enable the interrelationships between emotions, human motion and reasoning to be clearly visible.
Autoethnography is seen as a powerful method for investigating the importance of emotions in forming self-identity in human actions and for examining the relationship between agency and social structures:

Memory is tied to emotion; feelings make events significant. In memory work, replaying past emotions reveals the forces and everyday events that helped to shape self-identity. ...One major advantage of such methodology is that personal memory work exposes the complex interaction of various social statuses (for example, class, gender, sexuality) in the emotional patterning of individual lives. (Daquin 2000, cited in Sparkes 2002, p.100)

5.4.1 Self-defining memories

The form of autoethnography selected for use in the current study was that of the self-defining memory, a method developed by social psychologists Singer and Salovey (1993), relating to Script Theory based on the work of Sylvan Tomkins (1991).

A self-defining memory. A self-defining memory is a memory of a specific event – occurring at least a year earlier – in an individual’s life that is remembered very clearly and that still feels important whenever they recall it. It is a memory that helps individuals understand who they are, and might be the memory that they would tell someone else if they wanted that person to understand them in a more profound way. The memory may be positive or negative, or both, in how it makes them feel. The important issue is that it leads to strong feelings in the individual. It is a memory that has been recalled many times and should be as familiar to the individual as a picture they have studied or a song (happy or sad) they have learnt by heart.

The explanation of self-defining memory to the student. An explanation of the self-defining memory was provided for the student participants:

To understand best what a self-defining memory is, imagine you have just met someone you like very much and are going for a long walk together. Each of you is very committed to helping the other get to know the ‘real you’. In the course of the conversation, you describe a memory that you feel conveys powerfully how you have come to be the person you currently are and how you have come to understand some aspect of the world. It is precisely these memories that constitute self-defining memories.

A small booklet titled ‘A written memory about an experience in your life’ was prepared to enable the student to write up their memory within a consistent
framework (Appendix 3). In addition to the information above, the following task was outlined for the students' response.

\textit{Task}

On the sheets of paper that follow, please jot down a caption or one-sentence summary of a self-defining memory that comes to mind when you were involved in some form of physical pursuit and experienced a defining moment when you gained a new insight and were able to understand something about yourself, others or the environment with great clarity. Describe the memory with enough detail to help your imagined friend to see and feel as you did. Although this memory is anonymous and will only be identified by code name, please do not reveal a memory that makes you feel uncomfortable when describing it.

Other demographics of gender, age and ethnicity were sought, together with the age of the student at the time of the event. The student was asked to provide a short one-sentence summary of the event (for example, 'My tent catches fire on an OE camp'), and indicate other person(s) involved in the event. The following was also provided as a prompt for the student to include important points as they wrote their memory:

- Description of the event: where you were, whom you were with, what happened, how you and others reacted, what has happened since? Include details that will help an imagined friend see and feel as you did. With about how many different people have you shared your memory? Please do not write about a memory that makes you feel uncomfortable.
- Write as much as you like on the following pages.

\subsection{The participating students}

For this research I drew on memories of life experiences from 34 male and female students aged between 7 years and 19 years across Years 2 to 12 of schooling. In total, two public secondary schools, one private R-12 school, and three public primary schools participated in the research.

\textbf{Age of students.} The range of ages was selected in order to investigate the commonality or variability of the students' living and learning as monists. It was anticipated that the interrelationships between human motions, emotions and reasoning functions would be consistent across the ages, only varying in complexity as the student age increased.
**Other student factors.** The issues of socioeconomic status, gender, class or ethnicity of the students were not important considerations because monistic operations exist within all people regardless of these features.

The processes of school and student selection and the facilitation of the writing of the autoethnographies by the students are detailed in the next section that outlines how the research was implemented.

### 5.5 Data collection

#### 5.5.1 Enlisting the participants

Six schools were approached through contact with their principals to be involved in the research. Each principal was met individually and provided with an information letter (Appendix 4) and consent was sought for students to be involved at specified year levels (Appendix 5). A copy of two ethics approvals, one from Deakin University Ethics Committee and the other from the South Australia Department of Education, Training and Employment, were also provided for the principals (Appendices 1 and 2). After describing the research to the principals, all six schools became involved in the project.

In each school one teacher was identified by the principal to assist with the selection of the students. Each of these six teachers was familiarised with the aims and objectives of the study and a second package of materials containing the information letter to the principal, ethics approvals from the two institutions and consent forms for the parents to sign was left with them. All six teachers gave their consent to be involved and were enthusiastic about the nature of the research (Appendix 8). The teachers each selected five male and five female students as possible subjects to be involved in the research. No selection criteria for the students were supplied because of the shared understanding that monistic functioning was ubiquitous in people. Discussions about the abilities of the children to write about an event in their lives did occur, but the final decision about whom they would select was left entirely to the teachers. The teachers identified students and ascertained whether they were enthusiastic about being involved.
Once the students had been recruited, an information package including a parent information letter describing the research purpose (Appendix 6) and a form that sought consent for their child to be involved (Appendix 7) was sent home for reading, signing and returning. When all signed consent forms had been returned, a two-hour time period was arranged for the students to participate in a ‘narrative of the self’ writing session. This was arranged to take place in a separate quiet room in each school.

5.5.2 The narrative writing session

Prior to the two hour session during which the memories were written down, the participating students were asked to begin thinking about a memory that they recalled often and could write about. This prompt was provided by the participating teachers in order to facilitate the writing process. It was very useful in assisting the students to focus on the task of writing their memory. They were aware that they were participating in research related to physical education after discussing the information letter with their parents. They were asked to write about only one memory. In general they were enthusiastic to write.

During the writing session, which I supervised, the students were asked to write about an important action event in their lives in the booklet provided and described earlier (Appendix 3). Any questions they had were answered during the session and, if required, they were prompted to recall as much detail as possible. The same procedure was followed in all six schools. Some students did not complete the task satisfactorily. For example, their memory was too disjointed to make sense. Others wrote of memories that were inappropriate for the research, such as the death of their grandmother.

To set a relaxed, reflective atmosphere to stimulate their writing, I told them about some of the memories that helped me realise something about myself, or other people or the environment. As a further example, I related a memory that one of my daughters had written about concerning a family camp when she became lost. It highlighted the emotions she felt, what decisions she had to make, other people she needed to rely on, and what the experience has made her realise about her own abilities and knowledge.
I then asked the students if they each had a memory that they could remember clearly and wanted to write about. On checking that each person was ready to write I reminded them of the core themes that should be included in the recollection – where you were, whom you were with, what happened, how you and others reacted, what has happened since? Include details that will help an imagined friend see and feel as you did. With about how many different people have you shared your memory? The group read over them together, often aloud. Each student then moved to a suitable place on their own and began writing their memory.

‘Brain food’ was supplied in the form of fruit sticks for the students to munch on as they wrote, and I remained with the group to assist at any time with questions or a clarification of a point that they might include in their written memory. Upon conclusion, they handed me their booklet. I thanked them and often gave a ‘post brain work’ fruit stick as reward for their efforts. Most of the participating students completed writing their memory within the allotted two-hour time-slot. However, some students wanted to continue writing and were provided with a self-addressed pre-paid envelope in which to return their completed memory. This occurred mainly with the senior students whose longer memories are illustrated in the next chapter.

The students wrote a great variety of memories and a summary of the scope follows in the next section. See also Table 5.1 over page. Involvement with the principal, teachers, and students from each school to gather the memories covered a period of up to six weeks.
### 5.5.3 The scope of students’ responses from their self-defining memories

Table 5.1 The scope of students’ responses from their self-defining memories

<table>
<thead>
<tr>
<th>No</th>
<th>Code name</th>
<th>Current Age</th>
<th>Age at event</th>
<th>Event nature</th>
<th>Human motion involved in event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Peter</td>
<td>18</td>
<td>15</td>
<td>outdoor ed camp</td>
<td>playing with flames in tent</td>
</tr>
<tr>
<td>2.</td>
<td>Eva</td>
<td>17</td>
<td>10</td>
<td>running through Venice to catch a train</td>
<td>running in a strange/unfamiliar city</td>
</tr>
<tr>
<td>3.</td>
<td>Jamie</td>
<td>19</td>
<td>13</td>
<td>high board diving accident</td>
<td>high board diving</td>
</tr>
<tr>
<td>4.</td>
<td>Lucy</td>
<td>18</td>
<td>14</td>
<td>swimming carnival winning 2 races &amp; being sick</td>
<td>sprint swimming</td>
</tr>
<tr>
<td>5.</td>
<td>Charlotte</td>
<td>13</td>
<td>10</td>
<td>first time played lacrosse</td>
<td>lacrosse sports clinic</td>
</tr>
<tr>
<td>6.</td>
<td>Katrina</td>
<td>17</td>
<td>11</td>
<td>broke arm ice-skating &amp; no activity for 3 months</td>
<td>ice-skating &amp; tennis</td>
</tr>
<tr>
<td>7.</td>
<td>Tim</td>
<td>19</td>
<td>16</td>
<td>playing baseball for a district club &amp; being dropped</td>
<td>baseball</td>
</tr>
<tr>
<td>8.</td>
<td>Michael</td>
<td>17</td>
<td>13</td>
<td>fishing trip to very isolated town</td>
<td>fishing</td>
</tr>
<tr>
<td>9.</td>
<td>Matthew</td>
<td>18</td>
<td>16</td>
<td>tent catches fire on outdoor education camp</td>
<td>emergency fire fighting</td>
</tr>
<tr>
<td>10.</td>
<td>Renee</td>
<td>10</td>
<td>8</td>
<td>shooting first goal in netball</td>
<td>netball game</td>
</tr>
<tr>
<td>11.</td>
<td>James</td>
<td>10</td>
<td>8</td>
<td>athletics relay race</td>
<td>running in a relay team</td>
</tr>
<tr>
<td>12.</td>
<td>Claire</td>
<td>11</td>
<td>3</td>
<td>dislocation of the arm</td>
<td>rocking on a rocking chair</td>
</tr>
<tr>
<td>13.</td>
<td>Allison</td>
<td>10</td>
<td>9</td>
<td>winning a gold, silver &amp; bronze medal at life saving</td>
<td>life saving carnival</td>
</tr>
<tr>
<td>14.</td>
<td>Callum</td>
<td>11</td>
<td>9</td>
<td>first goal at the local club</td>
<td>football game</td>
</tr>
<tr>
<td>15.</td>
<td>Rick</td>
<td>10</td>
<td>8</td>
<td>life saving carnival and footy match</td>
<td>life saving and football game</td>
</tr>
<tr>
<td>16.</td>
<td>Sean</td>
<td>10</td>
<td>8</td>
<td>kicking the first goal in football for the year</td>
<td>football match</td>
</tr>
<tr>
<td>17.</td>
<td>Eddie</td>
<td>10</td>
<td>9</td>
<td>dodging around 3 opposition players to goal</td>
<td>football match</td>
</tr>
</tbody>
</table>

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Toward a broader appreciation of human emotion in education
<table>
<thead>
<tr>
<th>No</th>
<th>Code name</th>
<th>Current Age</th>
<th>Age at event</th>
<th>Event nature</th>
<th>Human motion involved in event</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Heather</td>
<td>10</td>
<td>7</td>
<td>being late for a netball match</td>
<td>arriving late for netball</td>
</tr>
<tr>
<td>19</td>
<td>Jane</td>
<td>10</td>
<td>8</td>
<td>practising shooting for netball goal and an accident</td>
<td>netball goal shooting</td>
</tr>
<tr>
<td>20</td>
<td>Kimberley</td>
<td>12</td>
<td>7</td>
<td>a bad experience while at swimming lessons</td>
<td>swimming</td>
</tr>
<tr>
<td>21</td>
<td>Sharon</td>
<td>12</td>
<td>5</td>
<td>running and slipping on glass</td>
<td>running on a slippery floor</td>
</tr>
<tr>
<td>22</td>
<td>Grace</td>
<td>12</td>
<td>10</td>
<td>experiencing her mother getting burnt</td>
<td>camping in Greece</td>
</tr>
<tr>
<td>23</td>
<td>Eric</td>
<td>10</td>
<td>9</td>
<td>basketball practice and a broken arm</td>
<td>basketball</td>
</tr>
<tr>
<td>24</td>
<td>Amber</td>
<td>13</td>
<td>9</td>
<td>broken arm at ice-skating</td>
<td>ice-skating</td>
</tr>
<tr>
<td>25</td>
<td>Tracey</td>
<td>9</td>
<td>5</td>
<td>learning tennis and being coached by dad</td>
<td>tennis</td>
</tr>
<tr>
<td>26</td>
<td>Kelly</td>
<td>9</td>
<td>8</td>
<td>being washed over by big waves</td>
<td>swimming at the surf beach</td>
</tr>
<tr>
<td>27</td>
<td>Christie</td>
<td>10</td>
<td>9</td>
<td>coming first in a running race</td>
<td>running</td>
</tr>
<tr>
<td>28</td>
<td>Rebecca</td>
<td>8</td>
<td>4</td>
<td>falling off a swing and cracking the chin</td>
<td>swinging the wrong way on a garden swing</td>
</tr>
<tr>
<td>29</td>
<td>Lauren</td>
<td>7</td>
<td>4</td>
<td>swallowing a wishing stone</td>
<td>playing knuckles stones</td>
</tr>
<tr>
<td>30</td>
<td>Georgie</td>
<td>8</td>
<td>7</td>
<td>a metre high flood in the Grampians</td>
<td>camping with the family</td>
</tr>
<tr>
<td>31</td>
<td>Lee</td>
<td>8</td>
<td>4</td>
<td>enjoying learning how to ride a bike</td>
<td>learning to ride a 2 wheeler bike</td>
</tr>
<tr>
<td>32</td>
<td>Natalie</td>
<td>10</td>
<td>8</td>
<td>winning a long distance swimming race</td>
<td>distance swimming</td>
</tr>
<tr>
<td>33</td>
<td>Lisa</td>
<td>7</td>
<td>6</td>
<td>breaking an arm doing tricks on a fireman's pole</td>
<td>playing in the playground</td>
</tr>
<tr>
<td>34</td>
<td>Jessica</td>
<td>7</td>
<td>6</td>
<td>riding a 2 wheeler for the first time without trainers</td>
<td>riding a 2 wheeler bike</td>
</tr>
</tbody>
</table>

Toward a broader appreciation of human emotion in education
5.6 The interpretation and evaluation of the empirical material

The data generated by the students were scrutinised through the interpretive framework of monistic existence as outlined earlier in the chapter. Each written memory was analysed using the lenses of bodily experiences and reasoning, emotions and reasoning and the embodied mind in order to demonstrate evidence of integrated mind-body living in the students.

5.6.1 A memory grid of sensibility

Each student memory was passed through a memory grid of sensibility (Figure 5.1). As each memory passed through the grid, information was collected via the various lenses that could be used to construct a picture of the integrated nature of each student.

Common elements observed in the students’ memories were grouped under the lens through which they are observed to illustrate in more detail aspects that are present in the completely mind-body integrated learner. These will be presented in the discussion of the findings from the student written memories in the next chapter. The implications for curriculum change and opportunities for the physical education profession are elucidated in Chapter 7.

<table>
<thead>
<tr>
<th>A written self-defining memory of an important event in the life of the student</th>
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<tbody>
<tr>
<td>↓</td>
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<tr>
<td>Human motion – the nature and level of involvement</td>
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<tr>
<td>Metaphorical thought – sensorimotor involvement in concept formation</td>
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<tr>
<td>Emotional qualities – linkage with thinking and decision</td>
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<tr>
<td>Emotion, movement and reasoning</td>
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<td>↓</td>
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<tr>
<td>A greater insight into the presence and influence of the key operations of bodily actions, emotions and thinking in the way each student has learned and understood more about their ‘self’ and ‘world of being’ – their process of reasoning</td>
</tr>
</tbody>
</table>

Figure 5.1 The memory grid of sensibility (from the theories of Lakoff & Johnson 1999; Mayer & Salovey 1997; Damasio 1999)

Towards a broader appreciation of human emotion in education
5.7 Chapter summary

This chapter described the research process deemed appropriate to support the current study. The purpose of the process was to collect written memories from participating students and interpret them in order to gain insight into the important underlying processes that expose how individuals live and learn everyday as mind-body integrated individuals.

An outline of the phases through which the project progressed is provided to demonstrate the structure of the research.

Firstly, my position and role as interpretive researcher was established for the task of collecting data from participating students and scrutinising it for interrelationships between bodily experiences, emotion and reasoning as evidence confirming the mind-body integrated nature of the students. The research was situated within the social sciences codes of ethics.

Secondly, the purpose of the research was further confirmed and it was acknowledged that data would be considered by means of a monistic interpretive paradigm. Three sets of lenses were described that were used to interpret data generated by the students. These lenses enabled scrutiny of the information in relation to bodily experiences and reasoning, emotions and reasoning, and the embodied mind. As well, hermeneutic circle methodology enabled a way to continually interpret each individual student’s information within the overall context of the inquiry in establishing the mind-body integrated existence of the students.

Thirdly, autoethnography or “narrative of the self” was chosen as the most effective way to gather information about the lived experiences of the participating students. Self-defining memories were used as the form of autoethnography in the research.

Fourthly, empirical evidence was collected from 34 participating students from six schools through a clear process of consultation with parents, principals, class teachers and students who wrote narratives of memories in time set aside in the schools. A wide scope of memories of lived experiences was collected and summarised to be interpreted through the monistic paradigm.
Finally, a memory grid of sensibility was used to investigate the written memories as each was passed through. Common elements and groupings of experiences in relation to each of the three lenses are presented in the following chapter.
chapter 6

Illuminating the embodied mind: Discussion of the research findings

Cognitive science, the science of the mind and brain, has in its brief existence been enormously fruitful. It has given us a way to know ourselves better, to see how our physical being – flesh, blood, and sinew, hormone, cell and synapse – and all things we encounter daily in the world make us who we are. This is philosophy in the flesh. (Lackoff & Johnson 1999, p.568)

6.1 Scrutinising the written memories

Initial scrutiny. Using the set of lenses described in the preceding chapter, the student memories were scrutinised in order to understand how the students were acquiring knowledge, attitudes and skills in daily life. It was expected that their recollections would illustrate how human motion, emotion and reasoning were bonded, and were evidence of the integrated nature of mind and body. If this expectation proved to be accurate, it would be of great significance for a broadened appreciation, philosophical basis and practice of human motion in education and physical education.

Initially, the investigation of the written memories of the students looked for the following features:

- the presence, involvement and influence of human motion in the lives of the students
- the significance of what the students were doing in their lives at the time they gained new understandings
- conclusions the students drew from the experience about themselves, others and their environmental settings.

Secondly, looking for metaphors. As analysis of the data proceeded, examples of sensorimotor-based metaphorical thought relating to the concepts of self and morality were identified. The metaphors used by the students exposed the complex involvement of human motion and emotion in the development, understanding and expression of their developed and developing conceptual structures. The basis of this methodological observation follows the theorisations of Lakoff and Johnson, Salovey

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and Singer, Salowcy and Mayer, and Damasio as described in Chapter 4. As well, an examination was made of the qualities of the memorics in order to highlight the presence and influence of human emotion in the process of reasoning within each student’s world of being.

**Thirdly, finding interconnectedness.** Finally the scrutiny focused on discovering examples of the total interconnectedness of motion, emotion and reasoning to demonstrate the influence and interdependence between them as key operating functions. The examples observed emphasise the deep underlying processes at work in the integrated nature of all individuals living and making decisions, solving problems and developing skills every moment of every day.

The chapter sets the scene for the following chapter in which the implications of the conceptualisation of the embodied mind are explored for a review of philosophy, curriculum development and policy formation in education and, more particularly, physical education.

### 6.2 A bricolage

The task of identifying aspects of integrated mind-body functioning in the students’ memories was not difficult. The involvement of human motion and emotion in the everyday reasoning of the students was plausible and the application of current theories from cognitive and neuroscience was credible. The memories illustrated the truth about the monistic nature of a person. These aspects of monistic being are demonstrated through a selection of representative memories. Each memory collected from the students demonstrates the interrelationship between the key functions with varying degrees of emphasis. Together with other information revealed throughout the study, the evidence drawn from the student memories has been gathered to construct a bricolage composed of a set of representations that strongly promote the view of the embodied mind being the fundamental nature of a person.

As interpretive bricoleur for this complex inquiry, I borrowed theories from different relevant disciplines as outlined in the previous chapters to establish a solid case that all people function as integrated beings. The implication of this awareness for

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education, particularly physical education, creates exciting possibilities for the physical education profession.

The solution (bricolage) which is the result of the bricoleur’s method is an (emergent) construction.... (Weinstein & Weinstein, cited in Denzin 2000, p.161)

6.3 Descriptions of mind-body integration

Each of the students reported a memory of a significant event in their life that brought about a new understanding either of themselves, others or their local/global environment. Each had engaged in activities that demanded some form of human motion, that is physical activity; and each activity had ultimately prompted alterations in ‘flesh, blood, and sinew, hormone, cell and synapse’ (Lakoff & Johnson 1999), so that the students completed the activities changed people with altered social and temporal concepts of self and greater insight into their world of being. This included the social world of significant relationships and connections to the past, present and future.

A constant conceptualisation emerging from the student memories was that of the ‘self’ and questions about the structure of their inner lives and who they really were. The perspective of what is called the ‘inner self’ is the result of at least five different kinds of life experiences: ways in which we control our bodies; conscious values conflicting with values implicit in our behaviour; disparities with what we know and believe about ourselves and what others know or believe about us; experiences of taking an external viewpoint such as when we imitate others or try to see the world as they do; forms of inner dialogue and inner monitoring (Lackoff & Johnson 1999).

These arise because of the social context in which people live and the nature of the brains and bodies they possess. The first of these is to do with the way in which individuals try to control their bodies and the way they ‘get out of control’. Many of the memories reported the strong urge within the students to get, and maintain control of, themselves. For example, to experience a feeling of harmony, overcome an obstacle or execute a new feat.
All of the memories written by the students contained emotions they experienced during the reported event. The emotions were associated with a multitude of achievements, concerns, conflicts, peak moments, aspirations and dreams in their lives. The ‘scenes’ and memory qualities in relation to emotions expose the involvement and influence of emotions on the process of reasoning. Elements of every memory reveal the intensity and lasting effect emotions have on the clarity of the memory that continues strongly from the time of the event. The memories also expose how the emotions influenced the way the students reflected on the situation in which they had found themselves, and the problem-solving, conclusions, sense of right or wrong, and altered conceptualisation of themselves that occurred.

Several of the recollections epitomise the total interconnectedness between the key functions of emotion, motion and reason. They elucidate how the students responded to an event and made decisions, solved problems and gained understandings about themselves and others in an holistic way to reason about how they would act given the emotional influences impacting in their ‘world of being’. In these memories, bodily experiences and the array of emotional experiences exert an enormous influence on their reasoning about the way they would conduct themselves now and in the future.

**Jamie. Control of the self – the body in and out of control.** The memory of Jamie conveys the fight to gain control over himself after misjudging a dive and injuring himself both physically and psychologically. His memory describes the important life event at the age of 13 years when he was a promising junior diver. Jamie is now 19 years old.

I’ve never really been a very sporty person and when I first began to become interested in diving and discovered that I had talent, in platform and springboard diving, I tried my hardest to become the best I could be.

This specific memory began when I was about 12-13 and I was preparing to compete at the national diving championships in Sydney. I had already qualified to compete in the championships and still had around 6 months of training to go until the actual competition.

Then one day at training I was practising my dives, which I had done many times before, when I missed my take-off and hit my head on the board. I blacked out and woke up in an ambulance. At the hospital I was checked for
head injuries and any permanent damage but the only physical injuries were
a broken nose and a face full of scars, but the biggest thing that suffered
was my ability to be able to believe that I was capable to dive. I lost all
confidence in myself and I had to re-train myself to do even the basic dives
which you learn as a beginner. Throughout the whole time my parents and
my diving coach had to try to convince me that I was able to still do the
things I had done before the accident.

My coach told me when I returned to training that the only way to get over
this was to get straight back up there and try the same dive I had done when
I had my accident. I attempted to do this dive, but I just couldn’t do it.

Meanwhile my other dives were almost up to the same standards that they
were before and I was looking good to compete at Nationals but was still
one dive short. Finally my coach told me that if I didn’t get up there and at
least try the dive then I would never know how good I could be and all my
work up till then will be for nothing. He particularly told me that if I didn’t
do the dive then I may as well just not come back to training again. This got
me very upset but when I look back I can see that he didn’t mean it – he
was just trying to convince me that I was capable of competing and doing
well.

That night I got up and did the dive that had been bugging me, and as soon
as I had done it once it felt like a huge weight had been lifted off my
shoulders. The dive wasn’t very good but doing it brought back my
confidence.

Over the following months I improved the dive along with my others and
then I went to compete in Sydney at the nationals and I ended up winning
one of my events and became the Australian champion for my age group.

During this ordeal I learnt that it is very important to have confidence in
yourself if you want to be able to do your best in your sport. I also learnt
that the only way to overcome fear is to just get up and do what is bugging
you. Trust yourself and believe you can.

Believing what other people say to you about yourself is often very hard,
but most of the time they are telling you the truth and just want you to be
the best you can be.

Since this I have gone on to compete in a number of national competitions
and have had more success and even though I don’t dive anymore, I am still
heavily involved in the sport and I have lifelong friendships with the people
at diving, especially with my old coach, who still keeps in touch and he still
believes that I can be all that I want.
Jamie’s struggle to get control of himself in order to execute the troubling dive and the eventual conquest of the fear exemplify the inner struggle people experience to keep themselves in a state of harmony. Jamie explains his outcome using the metaphor – *...it felt like a huge weight had been lifted off my shoulders.*

His deep understanding of the stressful situation that he had finally brought under control was expressed using the complex metaphor that related to him moving an object (the weight) off his shoulders. In the process he regained his confidence and appreciated the efforts of others, including his coach and parents, in getting him to the point where he could *trust yourself and believe you can.*

Jamie also described getting back in control of himself and the situation with the metaphor – *I also learnt that the only way to overcome fear is to just get up and do what is bugging you.* The metaphor expresses tacitly Jamie’s recognition of the required blending of mind and body to achieve his ultimate goal – not just to complete the dive, but to balance his emotional state, his rational mind and his body function. Only through the act of achieving a physical goal – *get up and do* – could he regain control of his integrated self.

The resulting feeling of control provided improved confidence and a sense of self worth and Jamie continued to experience continued success in both physical and intellectual pursuits, including very high scores in his year 12 results.

**Katrina. Forms of inner dialogue and inner monitoring – looking for harmony.**

The significant effect that keeping control of your body has on keeping control of your total self is highlighted in the memory written by Katrina, now 17 years old, who experienced the flow-on implications of a broken arm while ice skating at the age of 11.

This was the second time I’d broken my arm and the third time I’d broken a bone. The other two times I was eight years old and not really as involved in sport as I was when I broke my arm again. At the stage in my life when it happened, I’d just been accepted in the junior tennis training squad at district level and I had just begun to play state tournaments. I was used to training at least four times a week as well as playing weekends.

When I fell over at the ice arena I refused to believe my arm was broken. It took Mum about six hours to get me to go to the hospital. I didn’t want to believe that it had happened. When the doctor told me it was broken I just cried. I remember coming home and Dad saying to me, ‘Oh Katrina’, with

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such feeling that it made me feel like he knew exactly how upset I was. He said everything in that one phrase. All my disappointment at not being able to play the next tournament or try out for the State training squad, it was all there in that one phrase.

As the days went on I began to think of it as a holiday. I didn’t have to get up early on a Saturday morning! This feeling lasted for around 2-3 weeks. Then I started to feel restless. I honestly felt like part of me was missing, like I was never quite happy.

I found I was picking fights with my parents and my sister a lot more than usual. I couldn’t concentrate and I found it hard to get to sleep although I was feeling really tired. I remember feeling a huge resentment toward my dad and my younger sister when they went down to the tennis courts. I began to hate doing anything remotely physical. I would sit down at lunchtime rather than play soccer or cricket like I used to. I felt really lost. I had to make friends with the girls who I used to laugh at because they would sit and watch the soccer match rather than play. It was a very strange and difficult two months for me. Then I had the plaster taken off.

I remember after a few days of light exercises dad took me out for a hit of tennis. The feeling of walking back on the court was like coming home again. I opened up my racquet bag and found all the sayings and quotes Dad used to give me to help me focus while I played. Things like: ‘Keep your eyes still so you remain calm’; ‘Taking deep breaths to calm nerves’. Seeing it all again made me feel so good. I think it made me also closer to my dad.

I now understand his need to play tennis even after a hard day’s work. I understand why he would ride his bike to work rather than drive. Most of all I think I found a small truth about what kind of person I am. I found out what I should do when I’m in a bad mood, what will make me feel better. That is doing something. Going for a walk or a run or playing tennis. Some people feel better if they call a friend or have a drink or read a book. I found out I feel better if I get up and do something hard and physical.

This knowledge really helped me during this last year at school. I know that I would study more efficiently if I went for a walk during my break rather than watch TV. I also knew what to do if I felt nervous in the exam. Instead of letting the feeling overwhelm me I would just pick a spot outside the window, still my eyes and take deep breathes, like I did as a 10-11 year old on the tennis court when I was nervous. Playing sport taught me a lot about myself and how I respond to situations. Quite often there are parallels between my game of tennis and my life. The skills learnt in one become useful in the other.

My time off with a broken arm made me realise what some people spend ages trying to do. I know how to deal with it when I get upset or something happens. I can calm myself down under pressure. I can also make myself feel great in a totally natural and healthy way.
The two months of Katrina’s forced rest to let her arm heal were described by her using the metaphor – *I honestly felt a part of me was missing, like I was never quite happy*. Because she could not move in the way she was used to, she felt she had lost control of the whole of herself. This led to frustration and a feeling of being out of balance. She was *picking fights and feeling a huge resentment toward my dad and younger sister*.

When the plaster was removed from her arm, Katrina was able to do light exercises and used the metaphor – *The feeling of walking back on the tennis court was like coming back home again* as an harmonious feeling returned. She felt the motivation notes and the self-control reminders brought her *closer to my dad*, another physical metaphor expressing a satisfying emotional and intellectual state.

Important self-knowledge that Katrina acquired was in relation to feeling out of harmony, or *in a bad mood*. She dealt with feelings of disharmony by getting up and moving – *I found out I feel better if I get up and do something hard and physical*. That is, she conceptualises that by moving her body, she can re-balance her feelings.

The lessons learned from her physical and psychological experiences as a tennis player – with a broken arm or not – enabled her to maintain control when stressed, as in exams. As she remarked – *Quite often there are parallels between my game of tennis and my life*. Thus she conceptualised her response to situations in life using a metaphor involving an activity. To control emotions and sharpen her thinking, she used physical techniques such as slow breathing and stilling the eyes, thus demonstrating a pervasive monist state of being.

**Michael. Forms of inner dialogue and inner monitoring – the self in normal or strange locations.** Control of the self is easier when an individual is in his or her normal surroundings. In strange places the feeling of control initially diminishes, but the possibility of acquired knowledge and enhanced integration of mind and body increases with adaptation to the new surroundings. The knowledge gained when a person moves outside their normal surroundings is demonstrated by Michael, aged 17, who experienced anxiousness at leaving his familiar surroundings on a trip to the small fishing village of Fowlers Bay on South Australia’s far West Coast at the age of 13.
Early in 1997 we were about to sit down to dinner one night, when we heard someone knocking on the front door. I went to answer and found that it was a good friend of ours and his family. We had not seen him for a long time, but I had always looked forward to seeing him, as I always liked to hear about his recent fishing trips.

He and his wife had been friends with my parents from before I was born, and I had always liked their company, but I had never really got to know them, or either of their children; one was a year older than me, and the other was my age. He had his own charter fishing business ‘Far West Coast Fishing Tours’ and it had always been a wish of mine to go fishing with him on one of his trips.

Later on that night, Mum called me into the living room, where all the adults had been sitting, and told me that he had invited me to go with him over to Fowlers Bay, on the far West Coast. At first I couldn’t believe my luck, as this was something that I had wanted to do ever since I started fishing. I was also told that I would be going with them on their family holiday, and not one of the charter trips, which I was told would make for an even more enjoyable trip.

As the end of school term 3 approached, I began to think a lot about the trip that was just a week or so away. He had told me that Fowlers Bay was very isolated (140km west of Ceduna) and had a total population of 14. I had never even visited a place like this, let alone stayed at one.

Before it came time to leave on the trip, I began to have some doubts in my mind about going. One of the most significant was along the lines of: ‘How well will I fit into a close community of only 14?!” Similarly, I wondered if the people of Fowlers Bay would see me as an ‘outsider’ or not welcome me. I had not talked to him about what the people were like in Fowlers Bay, but I assumed that he was friends with them as he had visited Fowlers so often.

Prior to the Fowlers Bay trip, I had never stayed anywhere out in the country, with the exception of Wallaroo on the York Peninsula. But even in Wallaroo, I had always been with my family and we had been going there for as long as I can remember, so it was all very familiar to me. The idea of staying with a family that I didn’t know all that well, in a place totally new to me suddenly seemed to be quite worrying.

Finally the time came for me to leave on my trip. I went over to stay at his house the night before we were due to leave, as we would be driving out of Adelaide at 4AM the next morning. All night I continued to wonder if I would be able to fit in comfortably with him and his family and the people of Fowlers Bay over the next 10 days.

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The next morning I met the other people who would be accompanying us on our trip. There was a good friend of his, another single man and a man and his wife, who also seemed to know him very well. I did not know any of these people, and was not aware that they would even be coming until that morning. The addition of these new people to the group made me feel more ‘alone’ as apart from me, everyone knew each other, and had already become good friends. With the increased size of the group, I started to have similar feelings about the group, as I did about the small Fowlers Bay community: ‘Would I be able to fit in well with this tight-knit group and not been seen as the outsider?’

The trip to Fowlers Bay was going to be around 10 hours in his 4WD. I was travelling with them all in his Landcruiser and was eager to get to know everyone better before we arrived at Fowlers later that afternoon. There wasn’t much talking or interaction between people for the first hour or so of the trip, but I guess that was due to the fact that everyone had been made to get up at 4AM on what was a pretty cold morning. Before too long, we soon began to chat, and I found that I had more in common with everyone than I first thought I might have; I found out that the oldest son was a fan of soccer and loved fishing like me, and that the son my age shared my ambition to one day become a commercial pilot. This immediately made me feel more comfortable, as it removed any feelings that I had of being ‘alone’, knowing that I would have people my own age there that I could enjoy the trip with. Similarly, I soon found that the other woman was a great person to talk to, and was also very friendly.

Knowing that I was no longer ‘alone’ made the thought of staying in a totally new place seem a lot less frightening than it had seemed initially. At several intervals along the trip, we made half hour stops to stretch our legs and get some fresh air. This gave me the chance to properly meet them all, and again made me feel more ‘welcome’ within the group that I was travelling with.

By the time we arrived in Fowlers Bay, I was really looking forward to getting out and exploring what would be my home for the next ten days. I was still a little preoccupied thinking about what the people of Fowlers Bay would be like, but the fact that I was not ‘alone’ had built my confidence and I was now in a much more relaxed frame of mind.

The first chance I had to meet any of the locals came when I was sent down to the caravan park kiosk to get a fresh loaf of bread and some milk. Inside the kiosk, there was a lady behind the counter with a small boy, and a man browsing through something on one of the shelves. When I took the milk and bread up to the counter, the lady behind it asked me in quite a friendly voice if I was staying with our family friend who had invited me over which I thought was quite odd as I had never seen her before in my life but she told me that she knew he was coming up that day and was bringing a friend for their holiday. Later on in the trip, we were visited by the man.
who I had seen previously in the kiosk. He turned out to be a friend of his and I spent a while talking to him about the beach fishing that he had been doing at Scotts Beach, near to Fowler's. He seemed quite happy to talk to me and was very friendly the whole time that he was in our cabin.

These two experiences were the only real interactions that I had with any of the locals in Fowler's Bay (besides saying 'hello' passing someone travelling to and from the jetty) but they were enough to change the way I thought about the people in this close community. Previously, I had been worried about that I may have been seen as an outsider whom no one in the community knew. Instead I found that the people I had met were, if anything, friendlier than the people you would meet ordinarily back home in Adelaide. I believe that much if my concern had been because of the fact that I had never been in an environment like that at Fowler's Bay before (away from my family for a long time in a place I had never been). As soon as I got to know the people that I would be staying with, and met some of the people of Fowler's Bay, all of the concerns that had bothered me before disappeared, and it seemed almost stupid to be worrying about them in the first place.

I believe my trip to Fowler's Bay was an important part of my life because it changed the way I felt about going into 'the unknown'. I had never before been away from my family for a period as long as 10 days, which was an experience by itself, but also being some 1,000 km away, in a place where I knew no one very well was a first for me.

After being on the trip I now look forward to chances to get away, seeing them as exciting opportunities, instead of looking for things that could possibly go wrong with them. As I mentioned before, I have always wanted to become a commercial pilot. One of the biggest fears that I had about pursuing that career was that I would have to leave home and go work up north for 2-3 years, an inevitable step in the process of gaining flight hours.

Now I look upon that as a great opportunity to see parts of the country that most people would never see, and meet more people out in the country. Similarly, I am looking forward to travelling to Alaska in May, where I will be living until August. Although I will be staying with friends who I know quite well, the rest will be totally new to me; I have never been overseas, or even flown interstate, and being away from home for four months will be something totally new to me (the Fowler's Bay trip is still the longest I have been away from home). But I look forward to these experiences without thinking much of what may go wrong in the process. I believe this can be linked at least partly to the experiences that I gained on my trip to Fowler's Bay.
Physical activities such as travelling outside one’s normal environment can be stressful, but provide an opportunity for learning and growing emotionally and intellectually. Michael worried that he was stepping outside the familiar boundaries that provided him security – his family, home, school, community – and moving into unfamiliar territory – physically, mentally and emotionally. This was expressed metaphorically by him as – How well will I fit into a close community of only 14?. He perceived himself as an ‘outsider’ in the small community and wondered if he would be welcomed. The feelings expressed by this metaphor reveal his sense of dissonance. Moving outside his ‘comfort zone’ challenged his monist self by introducing new experiences and knowledge that would require integration. The social discourse during the trip was the beginning of the increased growth of his inner being.

The very positive outcome from the trip to Fowlers Bay for Michael was that he developed a confidence about being out of his familiar surroundings so that he became quite comfortable about moving into other strange places – I believe my trip to Fowlers Bay was an important part of my life, because it changed the way I felt about going into the unknown.

Michael has since completed Year 12 with very high scores that have enabled him to begin his career as a commercial pilot with little fear of leaving home and meeting strange people. Metaphorically he describes his optimism and confidence about the demands of a future career – But I look forward to these experiences without thinking much of what may go wrong in the process.

Michael’s growth as a person was inspired by a family friend’s generous invitation. For others, however, school programs can provide the same opportunities for enlarging the scope of the integrated self with a vast array of choices of active pursuits, including camps, excursions, billets, hikes or school exchanges.

**Heather.** Conscious values conflicting with values implicit in our behaviour – learning to think for oneself. Physical activity often involves being a member of a team, with all of its concomitant responsibilities and opportunities for mental, emotional and moral development while engaged in physical activity.
Heather, aged ten, recalled a memory of when she was seven years old and felt as though she had let the netball team down because she arrived late, although her lateness had been inadvertent, a result of common carelessness.

Once at the start of a netball season nine times out of ten our games were at 4:45. One of our games had to be at 4:00 and we didn’t check the timetable. Dad was busy while Mum was at work. Dad dropped me off at the netball centre and I ran to our game. Of course the game was nearly over when I got there and I felt really bad about it so I started to cry. I felt like I didn’t respect my team members enough as I should.

This event has changed my thinking by making me double check times of things and to respect things enough to care.

Every time I look back at this I think of what I did wrong and how I will prevent it from happening again. Now I think I could try to remember or check things myself instead of relying on someone else.

Sometimes in life, things happen that we have absolutely no control over. Even though I wanted to play netball Dad dropped me off late. I had no control over what happened.

At seven years of age, young people usually rely on others to guide and order their lives. Activities and commitments at that age provide the opportunity to increase the maturity of the integrated self. Heather’s experience of failing to note the changed starting time for her netball game had a significant effect on her sense of responsibility to both herself and her team mates – This event has changed my thinking by making me double check times of things and to respect things enough to care.... Now I think I could try to remember or check things myself instead of relying on someone else.

Heather was so upset by her failure to make the game on time that she demonstrated her emotions physically – I got there and I felt really bad about it so I started to cry. This comment demonstrates the intimate relationship between body and mind, emotion and activity.

Natalie. Disparities with what we know and believe about ourselves and what others know or believe about us – self-belief through physical activity. Not convinced she could win races, Natalie nevertheless was willing to compete and with enormous self-determination won a race that strengthened her monist self – I felt great, fabulous and encouraged....It has taught me to always believe in myself and
never be scared. Engaging in a physical activity she acquired attitudes that she understands will impact on the activities, thoughts and emotions of the rest of her life.

I have never been very convinced that I could win things, for example races. Two years ago I had a swimming race at my swimming club, Balyana. Another girl from my group was against me in a 1500m race. My Mum and coach were there and some other people with kids taking a class. I was nervous because this girl was taller, faster and older. It was time.

My coach said go. I remember diving in hoping I didn’t crash. I took a deep dive taking me through the water like I was flying. I felt like I had all this unused energy. As fast as I could I swam and swam. I was in front of the other girl as I was coming up to my 10th lap. I kept on swimming using every ounce of my energy, but now I felt tired. I had made a mistake, I had used up too much energy in the first half of the race. Slowly the other girl had gotten in front of me. ‘I have to win,’ I said to myself. I was pushing myself really hard. While I was trying to speed up I started losing breath. This was around my 19th lap.

I had a few more laps to go and I tried as hard as I could to catch up to the other girl. Gradually I caught up. It was getting closer to the finish. I kept repeating to myself that I could do it. I was now level with the other person and there were two laps to go. We equally turned into our last lap. We both swam as fast as we could. I was concentrating on the end of the pool. It came closer and closer. I touched it! I looked around and immediately the other girl touched the end. I had won! I couldn’t believe it. I felt great, fabulous and encouraged. For a reward I got a certificate. I will never forget this moment of joy. It has taught me to always believe in myself and never be scared.

Jessica. Ways in which we control our bodies – personal growth through mastery of a physical skill. Jessica’s experience of mastering the two wheeler with the help of her father provides an example of successful growth of the integrated self.

In this case an incident of increased physical prowess once again added to increased self-confidence. The assistance of a trusted ‘other’ proved to be an inspiration and a boost to Jessica’s determination – I thought I was going to fall off and sometimes I fell and sometimes I didn’t fall. Dad was watching me and I knew I could do it. I pushed and pushed and I did it.

Our house was having a new backyard being built. We went down to the lockup which was where we kept our stuff while our back yard was being built. I wanted to ride my bike without trainer wheels so Dad took them off and I rode my bike. So that day we went down to Unley Oval and Dad helped me. I learnt to keep on trying and have a go. Dad pushed me and I pushed on the peddles so now I thought I could ride my bike really fast round the pool.
I thought I was going to fall off and sometimes I fell and sometimes I didn’t fall. Dad was watching me and I knew I could do it. I pushed and pushed and I did it. I wasn’t very good at steering at all but I got better now. I would never have done that if I hadn’t had the common sense to try. Dad pushed me so I could ride my bike by myself without any help.

The fact that Jessica did not let herself or her father down during the course of a physical learning activity increased her sense of self-worth, as indicated by the tone of her written memory, as mind and body worked together to help her achieve success.

Grace. Experiences of taking an external viewpoint such as when we imitate others or try to see the world as they do—the self as being projected into someone else. The act of imitation begins at a very early age. It involves such events as smiling back when someone smiles and waving back when someone waves. The act of imitating uses the ability of an individual to project and conceptualise their ‘self’ as inhabiting the body of another person. Grace’s interpretation of her experience is a good example of the development of empathy when her mother is injured accidentally on a camping holiday in the Greek Isles.

When I was ten years old, I went on a holiday with my parents to Greece. We went there from May till July. So that made the weather warm. We stayed at my dad’s village off Thessaloniki. One day I was sleeping in and my parents were boiling some water with a small portable gas thing. I heard a scream and I woke up suddenly. I ran to the kitchen and saw my mum about to fall. My dad took her to the bathroom to wash.

What had happened is my dad accidentally turned the gas too far and my mum was holding the handle. The gas and fire had travelled on her right arm and her head. Nearly most of her hair had been burnt. The neighbours heard the scream and came to see. She had to be taken to the hospital in the next village. She had to have so many injections and she had to have so many different creams applied to her arm and wrapped up with a bandage. It had to be changed very few days.

Her hair just needed to be cut short because it was hard and dry from the flames. I don’t know all what had happened on that day. I only saw what I only saw. Now you can still see a scar on her right arm. I felt sorry for my mum and I still do. My dad said to my mum in Greece that the scar would go away by the time we would be back home. But two years later the scar is still there. I wouldn’t like anything bad like that happening to my life or to a family member or a close friend.
It does not require that someone be injured for the development of the ability to put yourself into someone else’s place. However, Grace did grow intellectually and emotionally from this experience on a camping holiday, understanding another’s pain and trauma, as well as wanting to avoid the same sort of incident in the future — I felt sorry for my mum and I still do... I wouldn’t like anything bad like that happening to my life or to a family member or a close friend of mine. Thus, physical activity can have negative consequences but still inspire positive self growth.

Lauren. Forms of inner dialogue and inner monitoring – the development of morality. Moral authority is modelled on the dominance in the physical sphere, particularly with younger children. Legitimate authority indicates that young people are told what will hurt them and when they are hurting others. Parental authority is moral authority in the family and parents have the responsibility of protecting and nurturing their children to teach them how to protect and care for themselves and how to act morally toward others. Parents earn the respect and obedience of their children by nurturing, protecting and educating them effectively and acting morally. This earned respect is what makes the authority legitimate (Lakoff & Johnson 1999).

Morality protects personal well-being and enhances that of others. Paternal authority and action are well illustrated in the memory from seven year old Lauren in describing her ordeal at the age of four when swallowing a wishing stone and being cared for.

When I was four years of age I was watching TV with my sister and we were watching Bananas in Pyjamas. Whilst I was playing with the wishing stones inside, my mum and dad were outside gardening and I thought that the stones were yummy so I put one in my mouth and, oh-o, I swallowed the wishing stone. I told Hannah. We raced outside. We told Mum and Dad and then I started to cry so Mum took me back inside and sat me on the toilet but no it didn’t come out.

So the next day Mum took me to the hospital to get an x-ray and then I took off my clothes. Luckily no one was in the room at the time except the lady who was going to do the x-ray. It was very embarrassing, but when it was over I accidentally ran out of the room with no top on and hugged my mum. Then my mum told me that my top was off and then my cheeks went pink. So I ran into the x-ray room and grabbed my top and put it back on and started to laugh and I didn’t stop laughing until we got home. And then the next day when I went to my nanas and papas’ place I went to the toilet and it came out. And that, my friends, is that!
The nurturing role played by the parents allayed Lauren’s fears. In a physically negative situation, she experienced the positive of her parents providing the care and comfort she needed. Without doubt this physical experience with all of its concomitant emotional and rational accompaniments will have contributed to Lauren’s growth of self. It was a lesson in how to treat others and how to look after herself.

Rebecca. Ways in which we control our bodies – learning about physical limitations. Eight year old Rebecca’s memory of coming off second best when experimenting with the garden swing at the age of four reveals the personal understandings that emerged when she suffered a serious injury and developed a moral stance that she knows will protect her in the future.

Once I was swinging on my swing with my tummy on the part that you sit on. So as I was swinging my family was inside and I was singing a rhyme at the time. I was in my garden with bricks under me and my sister heard a screaming noise. It was me. I had fallen off the swing. She came rushing out. I was bailing my eyes out!! She said in a worried way, ‘Rebecca are you all right?’ Dad got a hanky and put it on my chin. He rushed me to the hospital! I was worried alright! I had to stay some nights. For about a year I had to have plaster on it. After that I would NEVER go on the swing like that again!! Every day after the plaster was gone I would see if the mark had gone and now I can still feel the crack.

The developed moral stance in Rebecca is explained metaphorically by her as – After that I would NEVER go on the swing like that again!!.

Kelly. Disparities with what we know and believe about ourselves and what others know or believe about us – developing self through risk taking. Kelly, aged nine, provided a memory about being washed over by big waves at the beach when eight years old. It was a physical experience that brought her a rational insight into the importance of listening to the advice of others – And now I have learnt to listen to what Dad says. At the same time, however, she is displaying the individualism of someone who is developing the confidence to be a risk taker – because I like getting dumped. It’s fun. I always think of that experience when I see big waves. I have been dumped on my boogie board with the waves five foot.
I was on the beach with the rest of my family. It was a very hot day. I got tired of swimming so I decided I'd stand in the water and the waves would crash on me but I was planning not to fall in the water.

Then the next minute Dad said, 'Be careful, Kelly. You'll get dumped.' 'No I won't,' I said. 'I'll be fine.' Then he said again, 'Kelly I really don't think you should stand there. The waves were very big.'

Then the next minute the waves dumped me. I was in the water, scared. Then I got up with my hair all over my face. 'I told you that would happen,' Dad said.

I was a bit cold and worried after that. I went over to Mum and sat down with a towel around me. I have been through that experience a few times but it doesn't get me worried like I don't want to do it again because I like getting dumped. It's fun. I always think of that experience when I see big waves. I have been dumped on my boogie board with the waves five foot. That is my experience I have had. And now I have learnt to listen to what Dad says.

**Lisa. Experiences of taking an external viewpoint such as when we imitate others or try to see the world as they do – moral authority.** The wider view of moral authority was not lost on seven year old Lisa who at the age of six broke her arm playing on the playground equipment. Here the authority figure was the teacher in the yard whose support and guidance should have been sought to protect and ensure Lisa's well-being, which Lisa acknowledges.

When I was in Reception, I was playing in the playground on the fireman's pole. My friend had a cool new thing she could do on the pole. (Holding on the top of the pole, putting your legs around the pole, and sliding down.) I had done that a few times and was having another go. Suddenly my hands got greasy and slippery and I thought I was going to fall. Two of my good friends were waiting for a go, and I asked them to hold onto my legs so that I would not fall. Then suddenly I fell, I think because I was heavy and because they were holding onto my legs; and it was a tough fall, that I hit the ground.

Unluckily the top part of my arm hit the ground first. You should have heard it. I was screaming like mad. It hurt. The teacher on duty came and took me to the office. When you get hurt you get taken there. Everyone was taking good care of me. Then one of the teachers called the hospital and my mum. I got taken in the ambulance.

When I got there, I got booked in for an x-ray. After I had chatted to someone and told them my name and address, I got taken in a wheelchair to the x-ray place. We had to wait because other people were having their go. When it was my turn I had to take off my clothes to have an x-ray. After a little bit more waiting, I got my x-rays. It seemed I had broken my arm.
Even worse it was too high to put a plaster on, so I had to stay in a sling for about six weeks. But it soon got better. It was fun going in the ambulance, but not breaking my arm. So the moral of this story is, NOT to swing on the top of the pole and to always call a teacher when you are in trouble so that they can help you out.

Lisa explained her new moral understanding as — *not to swing on the top of the pole and to always call a teacher when you are in trouble so that they can help you out.* She can see that from a responsible other’s point of view that she should have been more careful; and acknowledges in her understandings developed from a negative physical experience that risk taking needs to be thoughtfully considered to avoid accidents, but that trusted others in authority can be relied upon to assist you.

**Matthew.** *Forms of inner dialogue and inner monitoring — dealing with contrasting emotions.* Matthew, aged 18 years, wrote a memory about when he was 16 years old attending a Year 10 Outdoor Education Camp and a tent caught fire.

On the day of my tenth birthday (June 3, 1999), I was walking through the beautiful Finders Ranges with 13 other students and three teachers. We were there for the second camp of our Year 10 outdoor education course and we were on a high and having a ball. It was the second day of a three day hike and the weather was perfect, 18 degrees and not a cloud in the sky.

I can recall walking along the top of a hill known as ‘The Battery’ because of its cylindrical shape. We were all spread out over a dirt road that was bathed in a sunshine that enhanced the colour and brightness of the yellow sands and stones that formed it. The camp was built up by the teachers to be a gruelling hike from hell, but even though the packs were heavy, we were all enjoying ourselves and quietly chatting our way down the road.

When we got back to camp, evening was upon us and the air quickly chilled. The camp was located alongside a small flowing stream at the bottom of a deep valley. The light in the valley was unusual as the camp was in the dark shadow of the mountains but the sky above us was bright blue. As we dispersed from the campsite to collect wood I noticed insects filling the air. We brought the wood back to the camp and then retreated to our tents to make our dinner on the little gas stoves we had been given. My cooking partner and I had stir fry chicken and vegetables, and a lot of it, as the country air always makes me hungry. After dinner the group sang ‘Happy Birthday’ to me and we retreated to the campfire to talk. When darkness had well and truly set in, our teacher organized an orienteering exercise, which was both fun and frustrating at the same time. Although my partner did not take the game very seriously, we still finished the course.

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Now that all of my pent up energy had been sapped from my body, I was ready to relax and the typical camp activity of toasting marshmallows began. Discussions about toasting techniques filled the night sky and these were followed by discussions about the stars that are all the more visible in the country sky. Although it was only nine o’clock, the crowd around the fire soon broke apart and we all ended up in bed relatively early. As I began to drift slowly off to sleep I was woken by the sound of nearby tents opening. A few of the students, who shall remain anonymous, had decided to put out the fire using one of the body’s natural functions. Although there were four of them, they simply didn’t have the firepower. The laughter soon died out and once again I drifted to off to sleep.

Then it happened. I was awoken by a cocktail of noise and light that I don’t ever want to experience again. The side of the tent I was in was lit up with a the glow of light coming from the tent next to me and I knew its source was fire.

The yelling and screaming that instantly followed merely confirmed my suspicion. I reacted instantly as the screams released a rush of adrenaline that I had never experienced before. I flew out of bed to help and in the darkness I reached for where I thought the bottle of water was and I hit it instantly and jumped out of the tent. I saw one side of the neighbouring tent almost completely on fire and I began to put out the flames with the water. I hadn’t even noticed that the two who were in the tent had escaped until one grabbed the bottle from me and then handed it back. The entire event must have only occurred in a matter of seconds, but due to the adrenaline it felt like minutes. I can remember thinking that the one litre of water I had was not going to be enough but as the last drips left the bottle, the last flames disappeared.

I now had time to observe what had happened and to think about what had happened. For a moment, we all stood around the tent and silently stared at it. The silence didn’t last long as we started to ask questions as to how the fire started. The teachers then arrived on the scene from their tents that were only 50 meters away. I soon realised that the fire had burned one of the boys hands and the teachers took him to the creek to cool his burns. We stood there shaking, only just beginning to notice the numbing cold. No one else had been awakened by the event and I could hardly believe it, as it seemed to be so loud.

With chattering teeth we told each other our stories of what had happened and only then did I realise that his arm had caught fire as he tried to put out the blaze. One of the boys in the tent told us that the fire had started when the one who had burnt his hands lit a small container of methylated spirits as a light. He accidentally knocked it over sending flaming fluid across the floor of the tent. He tried to put it out with his hand but he only splashed the flaming liquid on to his forearm.
Apparently I was the only one that had not seen that his arm was on fire. I
only had eyes for the tent. As it turned out, he had grabbed the bottle from
me to put his arm out.

The student teacher raced up to us from the creek. She said that he had been
badly burned and he needed something to relieve the pain. She told us to
grab our torches, get some shoes on and a coat. Down in the valley there
was no mobile phone reception, so the three of us left the camp and walked
towards the summit of a nearby hill. It was cold and I was hyperventilating
as the adrenaline was still in my veins. There was hardly any moonlight so
it was pitch black outside of the torch beams. We walked briskly up the hill
at a steady pace and Marty and I told the student teacher what had happened
and we talked of his stupidity.

The road was wide and the rain had created a gully down the middle of it. I
walked with one leg on either side of the gully dodging the small rocks on
its banks to avoid twisting my ankle. We constantly tried to use the phone
but even when we got to the top there was no reception.

As we started the walk down we realised that we would have to get to a
higher mountain or the park ranger’s house if we were to get some help. We
got back to camp and looked at the map. As it turned out, the highest
mountain in the region was on the way to the ranger’s hut. The walk was a
lot longer than the one we had just completed but the adrenaline gave me so
much energy that I still wanted to go. Instead the student teacher took one
of us and another boy as she thought he was fitter and I can remember
feeling a little angry about not being allowed to go, as I knew I could have
done it as well as anyone.

As they left I observed what had happened at the camp site. The campfire
had been lit again by another teacher and the others were sitting around it
talking. The boy with the burnt hands was wrapped up in a sleeping bag in a
nearby tent and the lead teacher was running creek water over his hands.
She placed a saucepan under his hands and poured cool water from another
pan over them. She then took the full pan from under his hands, replaced it
with the empty one and continued the process. Two other students were
bringing pans of fresh, cool water from the creek and emptying the old
ones.

I decided to help out so I took the teacher’s place in the tent. His hands
were dark pink because all of his outside layers of skin had been removed.
Pieces of skin hung off of his hands and other strips floated in the water. He
was badly burned but he wasn’t in complete distress as he talked calmly of
the pain and of how much trouble he was going to be in with his parents.
When one of the girls relieved me of my duties I went to the campfire and
reflected on the event. I then remembered that the tent that had caught fire
was the one that I was sleeping in the night before and that all of my
clothing and supplies were still in there.

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I surveyed the damage and found that apart from one pair of shorts and a packet of Coco Pops I hadn’t lost anything. I sat by the fire in my sleeping bag and a group of us calmly talked for a few hours and took it in turns taking care of the injured boy. The conversations and especially the male teacher’s farts took my mind off the incident. Eventually, at around two o’clock, I decided to go to bed. I had only been asleep for half an hour when I was woken by the sounds of cars. I got out of the tent and saw the three who walked off climb out of a jeep. An ambulance followed behind the jeep and the injured boy was quickly aboard and on his way to the local hospital. Now he had gone, everyone went to bed and finally I got some sleep.

Overnight one of the teachers went with the ranger and brought the bus we came on closer to the camp so that we didn’t need to walk too far in the morning. At sunrise we packed up the tents and all of our gear and left the campsite. The third day of the hike had been cancelled and we went straight to the bus instead of completing the trail.

Amazingly, some of the students had slept through the whole thing and on the ride home we who had experienced the event were more than willing to tell the tale. I can recall being proud of the way I reacted to the fire and my coolness under pressure.

I had never been a part of an emergency situation before this event and I was amazed at the effect the adrenaline had had on me. It made time move at a snail’s pace and this allowed me to absorb every little detail and to remember the event vividly. I have recalled this event often and I am easily reminded of it. If I am in contact with something from the event my memory is jogged back to this time. If I smell methylated spirits or hear about the injured boy or a house fire I am automatically reminded of this experience. I think that it is my body’s way of preparing me for the reoccurrence of the event.

I feel that when my mind senses something that it relates to the camping fire it reminds me so that I am careful and on guard in case it happens again. This both scares and reassures me at the same time. It scares me as it makes me feel as though I do not have total control of my body or mind. This was the first experience that showed me that, to a degree, I can be taken over and controlled by my subconscious or overconscious self. On the night of the fire I was on autopilot. I was quicker, I was faster, I was stronger, but I didn’t know it till afterwards. I was in a pressure situation and my mind took over it forced me into a state of hyperconsciousness. But in a way this also makes me feel safe as I know that if another emergency situation comes along I can be elevated to a higher level of able-ness.
If there is one thing that people take for granted it is their minds. This experience alerted me to the fact that the one part of me that I cannot control or regulate is my own mind. The mind can think about whatever it wants to and it can control every part of my body but itself. I now realize that there is a part of me that I cannot consciously control.

It acts like a reflex muscle, but it’s a part of my mind. Like my conscience that overlooks my morality and behaviour there is a part of my mind that is there to ensure my physical safety. I can now feel the presence of this part of me and I realize its power. It can keep me safe and enhance the power of my body but if it goes wrong it could also harm me. This experience has helped me to understand how mental illness is real something I ignored in a previous state of naivety. Since the event I have not been so fearful of similar events occurring. In fact I long for the next emergency so I can revisit that state and feel the adrenaline once again.

Matthew’s memory clearly highlights the fluctuating emotions he experienced during the second day of his Outdoor Education camp. The emotions were intense and enduring across a wide range of ‘scenes’ he experienced that day.

The feelings of happiness – ‘we were on a high and having a ball’ – related to the way Matthew thought about the beautiful Flinders Ranges – ‘weather was perfect, and not a cloud in the sky.’ Feelings inspired by the vigorous outdoor activity increased his appreciation of his surroundings – ‘bathed in sunshine that enhanced the colour and brightness of the yellow sands and stones that form it.’

The awareness of the different colours, insects, campfire and the pleasure of being sung to for his birthday, even finding fun in the night orienteering, resulted in the contented feeling that Matthew experienced – ‘now all that pent up energy had been sapped from my body.’

These positive scenes contrast significantly with the sheer terror of being awoken by screams from the tent ablaze next door – ‘I was awoken by a cocktail of noise and light that I don’t ever want to experience again.’ However, the frightening scene was accompanied by the physical rush of adrenaline – ‘that I had never experienced before’ – that enabled him to respond remarkably quickly and appropriately. It was this scene that prompted Matthew to think about himself and his abilities in a crisis.
Matthew describes the temporal aspects of the incident metaphorically as — *time [moved] at a snail’s pace* — which highlights the movement and sensorimotor basis of his conceptual structure. However, it is his insight into the relationship between his mind and body that has had the greatest effect upon him since the incident — *I now realize that there is a part of me that I cannot consciously control. It acts like a reflex muscle, but it's a part of my mind. Like my conscience that overlooks my morality and behaviour there is a part of my mind that is there to ensure my physical safety. I can now feel the presence of this part of me and I realize its power. It can keep me safe and enhance the power of my body but if it goes wrong it could also harm me.*

This understanding of the integration of his mind and body reassures Matthew — *Since the event I have not been so fearful of similar events occurring.* The sense of integration is so strong that he revels in the trust he can place in his mind to look after his body, and the buzz that accompanies the challenge to his elemental self — *In fact I long for the next emergency so I can revisit that state and feel the adrenaline once again.*

Emotions have significantly influenced the way Matthew reasons about himself and his abilities in his ‘world of being’. The school camp provided him with a unique opportunity to gain self-knowledge in a set of contrasting emotional scenes.

**Charlotte. Disparities with what we know and believe about ourselves and what others know or believe about us — being a good sport.** Charlotte, aged 13, wrote of a memory that was the only one reported concerning a physical education lesson. She was ten at the time when she found self-confidence through unearthing capabilities in a completely new sporting activity.

As usual I had signed up for another sporting clinic that I didn’t want to do. I knew that it would be the same as the last one. Being yelled at, laughed at and shunned by my classmates was the ritual that always occurred during PE. This one would probably be worse because it was a sport I had never heard of before — lacrosse.

So, on that one windy day, my classmates and I walked briskly up to our school oval, the boys jeering and laughing, the girls in tight knit groups, gossipping, and our sports mad Year 4 teacher walking in front of us, ready to greet the lacrosse coaches with a mile of questions. As I had never played lacrosse before, I approached the coaches and their equipment with caution.
The coaches told us each to grab a stick and a ball and try and throw the ball in the air and catch it. For the first few times I tried, but after that I gave up because I believed that I should be able to master it in the first few tries. I did not know that it took more than one or two tries to achieve something. So I gave up.

When the coaches came around and saw me standing there, a glum look on my face, I told them I couldn’t do it. They said I could and made me try again. I dropped it and stated, ‘Soc’. They kept at me. I got exasperated, almost yelled at them in fury at myself, but I didn’t. Instead I pretended not to care about if I could catch it or not, when really that was all I wanted in the world right then.

In the next few sessions, I began to realise how much I enjoyed lacrosse. I finally learnt to catch the ball, and how to throw it, and how to ‘scoop’ it up off the ground, and I realised I might have finally found the sport I loved.

But, the next obstacle of the clinic was coming – a game.

In some clinics before, I had grasped the concepts of the sport, but never had I managed to play a game without either never being passed the ball or being yelled at for ‘supposedly’ making us lose.

But this was different. I was ready for that shunning and yelling, but it never came. My classmates had seen me in the last few weeks, and had also discovered, like me, I wasn’t that bad at it.

The game that I played was probably the best in my whole lacrosse career up to today. I stopped goals and shot them. I defended and attacked. For once I was part of the team and for the first time I had discovered what it was like to be part of a winning team.

Afterwards sheets were handed out, bearing the names of teams we may like to play for. But I lost that sheet, and to this day am glad I did. The next day a girl in my class asked me to play for her lacrosse team at Sturt Lacrosse Club. I said yes and without realising it, I had finally found a sport that I could enjoy, and learn to be a team player, a loser, a winner and an achiever.

Since that year I have played lacrosse for Sturt. The first year I played soft-lacrosse. The second mod-crosse and this year I played Under 13s for Sturt. Under 15s for East Torrens-Payneham and I may be playing Under 21s Indoor for Sturt.

This year I brought my own lacrosse stick, and at the end of the season Under 13s presentation night I received Best & Fairest and Most Consistent. Next year I hope to play Under 15s and then after that Under 17s.

I also do sailing, taekwondo, dancing & modelling. Lacrosse has definitely helped me discover myself and my relations with others.

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Through Charlotte’s perseverance and with the support and encouragement she received from her teachers, she was able to succeed in learning the skills involved in playing lacrosse. She grasped, reluctantly at first, and then enthusiastically an opportunity to control her body in spite of impediments caused by the emotions she experienced from being continually put down.

She explained this metaphorically – *In some clinics before, I had grasped the concepts of the sport, but never had I managed to play a game without either never being passed the ball or being yelled at for ‘supposedly’ making us lose. To her credit she was able to overcome the negative feelings – I was ready for that shunning and yelling – through her realisation, and the realisation of others, that she naturally had lacrosse skills; and gained confidence to completely involve herself very successfully in the game – *The game that I played was probably the best in my whole lacrosse career up to today.* Her striving for and finding a satisfying conclusion in order to dispel negative emotions provided the motivation for her confident wider involvement in sport and recreational activities – *I also do sailing, taekwando, dancing and modelling. Lacrosse has definitely helped me to discover myself and my relations with others,* an echo of Caddick’s observation that ‘we are our bodies, and only in and through them do we come to know ourselves and our relationship to others’ (Caddick 1986, p.76)

**Lucy. Disparities with what we know and believe about ourselves and what others know or believe about us – body-movement-emotion-reason.** Another memory that highlights the relationship of body-movement-emotion-reason is that from 18-year-old Lucy who experienced intense anxiety when she represented her school at a swimming carnival at the age of 14.

*When I was in Year 9 I was selected, through a series of trials, to participate in an inter-school swimming carnival. The event was held at the Adelaide Aquatic Centre in the Olympic sized, eight lane, fifty metre pool. The carnival was a chance for different schools to compete against each other in various swimming competitions including freestyle, backstroke and butterfly.*

*I remember the day clearly. Mum had come along for the event and my best friend sat beside me, just as nervous, waiting to compete in her own events. My greatest fear was to come last with all the people watching and let down the team. I was also slightly nervous about diving off the block and getting a bad start, or worse, having a false start.*
The place was filled with people and noise. There was a mixture of tension and excitement in the air. I sat and waited in the grandstand, about three-quarters of the way up, just in from the aisle. I had the perfect view of the finishing line. As my first event, the fifty-metre freestyle approached, I began to tremble. The clear blue water no longer looked inviting.

When we were called up to the starting blocks, my heart was beating so loudly that I couldn’t hear myself think. I was in one of the outer lanes furthest away from the grandstand. The race itself is a bit of a blur. I remember relaxing slightly once I realised that I had not false started. My fear of coming last drove my arms faster and faster and I ended up finishing in first place. I was extremely happy and couldn’t really believe it was true. However, I had pushed my body to the extreme and was shaking all over.

I was greeted back at the grandstand with happy faces. I tried to smile but instead I felt extremely sick. Mum made me drink some cordial. I threw it straight back up. It came as such a shock and I had one more event to compete in, the fifty-metre backstroke. A couple of teachers didn’t think that I should compete in the race.

However, I knew that it was something I had to do and that otherwise I would regret it. So as nervous as I was and despite the fact I had just been sick, I still competed in the event.

I can remember the exact moment that the race started. We had to start in the pool for backstroke and I really wanted to have a good take off. As I pushed off the wall, arms flying back to cut into the water, I remember the water shooting out from both sides of me. I had pushed off with such force I had taken half the pool water with me. I felt slightly embarrassed, as I knew everyone else would have had a clean start with minimal splash. Amazingly I finished first again.

The carnival boosted my confidence as I realised that I was better at swimming than I originally thought. I learnt that small hurdles should never stand in your way and to never give up. This experience also taught me that you can channel fear and make it work to your advantage.

Lucy describes herself as being in a state of extreme anxiety as she waited for her first swimming event – *I began to tremble. The clear blue water no longer looked inviting.* In this metaphor, she sees the normally friendly water as uninviting. The metaphor is an expression of her nervousness, and the trembling is a physical reaction to her anxiety. She particularly fears failing in front of a crowd and letting her team down – *My greatest fear was to come last with all the people watching and let the team down.* In spite of her serious physical reaction to her anxiety, Lucy’s social evaluative-self was spurred on by her fear of failure – *My fear of coming last drove my arms faster and faster and I ended up finishing in first place.*
Thus she describes the effect of emotion on her body and its functioning. Even when the race had been won, Lucy continued to shake and became physically ill. Even so, she determined to finish the competition – *...it was something I had to do and that otherwise I would regret it.* Moreover, in spite of a poor start, she won again, using her emotional state to propel her body, as she stated metaphorically – *This again panicked me. Adrenaline pumped through my body and I swam fast.*

Lucy expressed what she learnt out of the experience with the metaphor *small hurdles should never stand in your way and never give up.* Her conceptualisation is that of forcing the body up and over obstacles in order to gain control and to keep trying until there is a positive result. She also explained her emotional responses and the influence they had on her actions metaphorically as *...you can channel fear and make it work to your advantage.* By controlling and directing her fear she could benefit her actions, illustrating the mind (emotion and reason)-body integration.

**Tim. Disparities with what we know and believe about ourselves and what others know or believe about us – finding your level for harmony.** At the age of 16, Tim had the potential to be an elite baseballer yet chose to enjoy his beloved sport and make lasting friendships instead. Now he is 19 and relays his vivid memory with a sense of satisfaction.

One of my favourite pastimes has always been baseball. As a small boy in primary school, I used to play tee ball with my friends, and as soon as I was old enough, I joined the pee wee team at the Port Adelaide District Baseball Club. I used to go to two practices per week plus a game every Sunday morning, and I used to love it.

I played for the pee wee’s, then the under 14s and finally the under 16s. I wasn’t very good at first, but I persisted, improving my skills and slowly gaining a reputation as a skilled catcher. However, I was never really serious about baseball – for me it was just a fun hobby and a way to be with my mates.

The 1998 \ 1999 season was my first playing for the under 16s. At the time, Port Adelaide had three under 16 teams in the league – a division one team, a division two team and one playing in division four. During pre-season, all the under 16 players trained together, and after two or three training sessions, the time came to divide the players into teams. I found that I had been selected as starting catcher for the division one team. I was ecstatic – I was going to play A-grade baseball!
The reality wasn’t as great as I was expecting. The division one team was very serious, with many players who were serious about a future in baseball. Two of these guys were actually catchers, and they were both desperate to take my place as starter. The coach was a very serious guy, who cared much more about the team’s performance than the players themselves. He used to work us hard at every training – shaving that 0.25 of a second of the dash to first base was much more important than the fact that the players were all dead tired from running all through the three hour training. There was no real feeling of camaraderie between the players, as every one was competing with one another to snatch that starting place on the team. The emphasis was on personal performance, and the threat of being dropped from the team was ever present. On the scale of importance, having fun placed a distant second.

Having said that, there were some positive aspects to the A-grade team. We were good – very good. It felt good to be in a team that dished out a thrashing almost every week. I was also as fit as I had ever been, and the competitive part of me liked the fact that I was in a starting team in the A-grade league. I began to enjoy the competition with the other players. For me, baseball ceased to be a fun game and became a struggle to become ‘king of the hill’ – a competition to see who was the fastest, who could hit the furthest, who could clinch that vital starting spot every Sunday.

One day, about halfway through the season, things took a turn for the worse. I had not been batting well in the last couple of games, and one night at training I discovered that I had been dropped as the starting catcher on the Sunday. The coach was almost mocking as he told me that I had two options – one, sit on the bench on Sunday in case the other catcher got injured or two, play as starting catcher for the division two team. There was nothing I hated more than to be labelled a benchwarmer, so I opted to play for division two. After all, it was only for a couple of games while I got my batting average back up. The rest of my so-called team-mates were quick to label me a loser who wasn’t good enough for the A-grade.

As I showed up on the Sunday morning to play B-grade ball, I viewed my new team with disdain, feeling sorry for myself that I even had to line up with them. It was a horrible thing to feel, I know, but that’s how I felt at the time.

Playing division two was decidedly easier. The play was slower and it was easier to bat and field. The game was a lot less serious, and I actually had fun playing for the first time in ages. We actually lost that first game, which I thought would be humiliating, but it wasn’t. I was expecting the coach to start screaming at us about our poor performance (common practice in division one teams – sometimes even if we won) but there was no torrent of foul language. The coach, a jolly fat guy, simply pointed out a few weak areas that we would work on in training, then told us he was happy with the effort we put in and the spirit we showed. I was quite surprised.
The B-grade training sessions were also less intense. I got to know some of the guys and we became firm friends. There was no serious competition among the players, and there was a real sense of ‘esprit de corps’ in the team. I began to play baseball like I used to – for fun and to be with my mates.

It was easier to hit in division two, and I began to get better and better at the plate. My average went up a great deal, and I even managed to hit a few home runs, which is always a great feeling. We won some games and lost some, but it was always a fun experience. Emphasis was on the team’s performance, and never on who stuffed up and who didn’t – who had just lost their spot in the next Sunday game. I began to look forward to the next match or training session with anticipation.

About a month and a half after being dropped from the division one team, the A-grade coach approached me. He told me he had been monitoring my performance in division two, and was impressed with my improvement. He said that the A-grade team needed a new starting catcher and he was giving me the job. I then did something unthinkable – I told the A-grade coach to get lost. I said I was happy in the division two team, and didn’t want to move back up. Needless to say, the A-grade coach wasn’t happy. He told me that someone with my attitude would have no future in baseball, as I wasn’t willing to take opportunities that were offered to me. They were harsh words, but I couldn’t care less. I liked playing division two, and that’s where I was going to stay.

I learned that there was much more to sport than just being good. There was the friendship and camaraderie that develops between the players. There’s the joy of winning and the shame of defeat, feelings that are shared between all the players, bringing everyone closer together still. I learned that having fun on the field is far more important than your base-running times or batting average. I learned that the friendships you develop with your team mates remain strong, long after the memories of your performance on the field fade away.

Tim’s physical prowess allowed him to play sport at a very high level. However, the emotions that activity at that level generated for him were very contradictory. At a slightly lower level of commitment, he recognised his more harmonious self, where emotion, reason and body were comfortably integrated in his ‘world of being’.

**Eva. Forms of inner dialogue and inner monitoring – the beginning of independence.** This final memory from 17-year-old Eva, running at the age of 10 through the streets of Venice, provides compelling evidence of how individuals exist in a state of being where emotional and bodily experiences influence the sense made of their ‘world of being’.

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It underlines and confirms the fundamental role and involvement of these key human functions in the development of understandings, skills and attitudes that enable individuals to take actions and make responses as they live each moment of each day.

Eva's memory provides an exemplary conclusion for the presentation of evidence to support the case of conceptualising the nature of people as existing as integrated mind-body beings, that is, monists.

When I was 10 years old, I travelled to Europe with my parents and my older sister. We have extended family in Germany. However, we also ventured to other countries, including Italy. At the time – although strangely, not in retrospect – Venice was my favourite city.

I respond strongly to visual prompts such as art, architecture for a later connection.

My memory of running through Venice is particularly distinct. Our family separated in single-file and in a shake-up of the usual family dynamic, I was in front. We had been in Venice for about a week and I had been aware of where I was going and landmarks I was passing. I remember being excited by the independence of 'being in the lead'. Perhaps I felt a bit guilty for having initiated the situation, but I also enjoyed the glimpse of independence which being somewhat separated from the guardian figures of my parents and sister allowed.

I distinctly remember that I was wearing a pair of elastic sided riding boots which slipped up and down while I was running, but that I made a conscious decision to continue despite the discomfort.

The outcome of the story is that we missed the train, and caught another one an hour or so later. I reached the station a minute or so before the others – certainly far enough ahead to have a few seconds to consider that I had just made my first tangible, physical step towards independence.

Writing this story out, it does not seem meaningful or particularly interesting, but to me it represents the first time when I actually followed my thoughts about moving (albeit gradually, I was only 10!) away from the complete control of my parents by physically making a break.

In the scheme of my life, this memory stands out as the first time that I questioned my childhood boundaries and, perhaps more significantly, the first time that I consciously chose to allow my physical actions to completely reflect my thoughts.
6.4 Chapter summary

The findings as presented in this chapter provide evidence to support the embodiment of reason, the embodiment of the mind, and metaphorical thought and subjective experience. Such an exposition has been a major aim of this inquiry.

The way in which the process of reasoning is understood determines the conceptual structure relating to the conceptualisation of the nature of a person. Changes to the understanding of reasoning posited by Lakoff and Johnson as a theory in Chapter 4, have been supported by the findings from the memories. In particular, the findings support the basic tenets of the argument as follows:

- **Reason is not disembodied but arises from the nature of the brain, the body and bodily experience.** The very structure of reason itself comes from the details of embodiment such that the same neural and cognitive mechanisms enabling perception and movement also create the conceptual structures and modes of reason demonstrated by the students (all people).

- **Reason is not universal in a transcendent sense.** It is not part of the structure of the universe. It is a capacity shared universally by all humans as exhibited by the students through the commonalities that exist through the embodiment of the mind and interactions between people, and people and ecosystems. Understood in this way, reasoning is a deeply social process as well.

- **Reason is not purely literal, but largely metaphorical and imaginative as continually expressed by the students as they reported an important event in their lives in which motion and emotion were involved.**

- **Reason is not dispassionate, but is emotionally engaged as richly portrayed in the student memories.**

The line of argument developed in Chapter 4 to support the philosophical stance of human nature as being mind-body integrated was based on reason being shaped by the body, strongly influenced by the cognitive unconscious, and expressed as metaphorical thought. Because abstract thought has been discovered to be mostly metaphorical (Lakoff & Johnson 1999), the answers to the question will be mostly metaphorical. This has ramifications for philosophic inquiry in education, and within that the learning area of physical education.

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As a consequence, metaphorical thought was used as a major tool to expose the inextricable relationships between human motion, emotion and reasoning in the lives of the students (all people). This empirical methodology investigated the memories provided by the students to unveil how they conducted enquiries, solved problems, evaluated, criticized, deliberated about how to act, and gained an understanding of their self, other people and the local and global environments. The findings have satisfied the essential criteria established to assess the validity of this inquiry:

1. Human motion and emotion are inextricably involved in the process of reasoning within all humans. The research knowledge gained through the literature review and memory findings establish that this claim is highly plausible.

2. Theories from cognitive science, neuroscience and positive psychology relating to the embodiment of reason and a mind-body integrated existence have been established as credible.

3. The claim for the full recognition and flow-on implications of the understanding of the nature of a person as being mind-body integrated is enormously relevant for the broadened appreciation of human motion in education. It therefore entails the involvement and creative provision of human motion and emotion in learning. This confirmed relevancy provides an opportunity to move human motion, and a major representation of it in physical education, into the core of education programs at all levels across Australian education.

The chapter concludes with strong confirmation of the rebuttal of the nature of a person as being mind-body separated (a dualist). Such a stance opens the way to consider the implications for education based on the understanding that a person is an embodied mind, not a disembodied, dispassionate, disintegrated entity.

This understanding of the nature of a person should prompt profound change in the way education and physical education are philosophised and practised. As a result, the next chapter explores the impact of this understanding on the conceptualisation and wider appreciation of human motion in education.
chapter 7

Back to the future

The development of physical capacities and their links to improved health outcomes are a unique strength of physical education, yet it has far more to offer as an educational medium. Physical educators have much to gain from highlighting the potential for promoting a form of cognitive learning that is tied into social and physical development and which occurs through movement. (Light 2002)

The purpose of this chapter is to argue for the comprehensive and systematic inclusion of human motion in all facets of education for the reasons outlined in the previous five chapters and demonstrated in the sixth. The current study advocates the pursuit of human motion in education across all areas of learning, well beyond the sphere of what is currently understood as physical education; and certainly beyond the sphere of the current health and physical education learning area which is dominated by health discourses. The chapter argues that it is time that physical education went ‘back to the future’ and revisited the truths identified by the England Board of Education in 1933:

*The presentation of any physical activity in the school situation should be assessed by two criteria, the physical and the education. The two must go hand-in-hand and neither should suffer by over-emphasis on one [author’s emphasis]. The aims [of physical activity, that is, human motion] should be:

- to contribute to the general education of the individual through physical activity.... (Billborough & Jones 1973, p.23)*

What the Board of Education understood instinctively 70 years ago, is now known scientifically. Physical activity contributes to the general education – physical, intellectual, spiritual, moral – of the whole person because the person is whole. While it may superficially appear that the body is just a container for the brain, designed to keep the brain safe and nourished and to move it from place to place, the reality is that body and brain are one and the same organism. And that the physical shapes the metaphysical and vice versa.

The current study seeks to raise awareness of this fundamental truth that human beings are mind-body integrated. They are monists in every synapse and sinew, and to view them as dualists is to do the human organism a disservice, because the idea of

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mind-body separation allows the privileging of the intellect to the point where the body and its motion are largely disregarded or looked upon as irrelevant.

Research shows, however that:

- Human motion is inextricably involved in the process of reasoning and the building of the conceptual structure within a person.
- Human emotions are involved in and influence the reasoning and decision making of individuals.
- Most thinking and the expression of it are metaphorical in nature and expose the involvement of human motion.
- Integrated mind-body functioning is the underlying true nature of human existence (monism).

This knowledge has been derived from disciplines seldom used in the field of physical education including cognitive science, neuroscience, positive psychology and physical education philosophy. The new understandings and areas of knowledge are particularly important for the discussions that follow in relation to the priorities within education frameworks currently developing throughout Australia and overseas. They will be utilised in the development of a case for powerful resistance to counter Australian trends of marginalising human motion in education.

As the current study has progressed, the omnipresence of human motion in most, if not all aspects of life, and the revelations concerning its inextricable involvement, together with emotional influence, in the process of reasoning, have been demonstrated. The study confirms that human motion is a constant in our neurological or intellectual, as well as physical development. It should be of considerable concern, therefore, that human motion is becoming increasingly disconnected from people’s lives and from education.

It is ironic that as advances in technology improve global interconnectedness, communications, relationships, work and play have all increased exponentially in complexity; and at the same time disconnection with human motion is increasingly reported as being associated with poor health and wellness status including depression, obesity, diabetes, cancer, heart disease, osteoporosis, virtual learning, lack

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of commitment, indifference, irresponsibility, drug substitution, and so on (Corbin & Lindsey 2002; Bauman, Bellew, Vita, Brown, & Owen 2002). The state of hypokinesis in people is a symptom of the lack of understanding about the fundamental importance of human motion to human physical and mental wellbeing – to the gaining of knowledge and wisdom and the development of character. This misunderstanding, as has been identified by this inquiry, originates from the pervasion of mind-body separated ideologies throughout society.

Human motion and emotion in the process of reasoning maintain a symbiotic relationship. It is, therefore, imperative that an improved understanding of the process be developed and described, as in this inquiry, to allow for better management strategies to promote and maintain mind-body connectedness.

7.1 Dualism v monism in Australian and overseas education frameworks

There is tangible evidence that the movement towards global curriculum frameworks in industrialised countries is a process that is dividing, fragmenting and narrowing curricula into more specific subject areas. The areas being privileged through this process are mathematics, science, technology and languages. Recalling some of the comments by Wilson cited in Chapter 2 provides evidence of this trend:

Accept that some KLA’s don’t work, notably SOSE and HPE, and get rid of them in favour of their most constituent parts.

Recognise that throughout schooling there is a hierarchy of KLA’s, starting with English and Mathematics, and finishing with Technology, Health and Physical Education and the Arts, with LOTE in a special category of its own.

Acknowledge that for the first three years of schooling, English and Mathematics are the only components of the curriculum, with little time to be spent on the Arts, social skills and Physical Education. (Curriculum Corporation 2002, p.15)

Suggestions and attitudes such as Wilson’s have increased the pressure on physical education to justify itself in the curriculum, as earlier pointed out by Hardman in 1999 at the Worldwide Summit on Physical Education:

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Arguably, Physical Education has been pushed into a defensive position. It is suffering from decreasing curriculum time allocation, budgetary controls with inadequate financial, material and personnel resources, has low subject status and esteem, and is being ever more marginalised and undervalued by authorities. At best, it seems to occupy a tenuous place in the school curriculum: in many countries it is not accepted on par with seemingly superior academic subjects concerned with developing a child’s intellect. (Hardman 1999, p.32)

At the individual school level throughout South Australia this trend has been illuminated in a survey conducted in junior secondary high schools during the latter part of 2002 by Brown & Coulter (2002). The study was conducted within the $16 million Active for Life strategy, which had been introduced in schools and was designed over a four year period to ‘increase physical activity levels of children and young people while enhancing the development of positive attitudes towards participation in lifelong regular physical activity’ (DETE 2001, p.2).

It had been decided that a comprehensive study into the professional development needs of teachers of junior secondary physical education, sport and other physical activities in DETE schools was required. Further, it was decided such a study should also investigate some of the issues schools face in meeting the strategy.

Among the findings of this study, 11% of junior secondary schools were shown to have no specific time allocation for junior secondary physical education programs. In addition, 28% of schools indicated that physical education received a low priority for professional development compared with other curriculum components:

...issues identified in the surveys by school coordinators included its low priority ‘compared to high profile curriculum aspects’, the difficulties experienced in schools with limited peer support in their area of expertise, and these concerns being exacerbated with the significant curriculum diversity and challenges associated with this area of teaching (such as safety and legal issues). (Brown & Coulter 2002, p.20)

In a 1997 study to establish the amount of physical education and sport offered in South Australian schools, it had been decided to also investigate the issues schools faced in providing the programs. The study was conducted in metropolitan and country primary and secondary schools, area schools, Aboriginal schools and special
schools. The research participants were school principals, coordinators and key teachers of health and physical education, and teachers of physical education and sport across the Reception-Year 10 range. Among other issues, the participants reported on curriculum issues relating to the prioritisation of the learning areas in schools:

Primary based focus group participants were very aware of pressure to improve learning outcomes in literacy and numeracy. Competing demands for time in these areas created tension; Physical Education was usually afforded a lower priority by many teachers.

Teachers have felt clearly under the hammer, that they need to produce the goods in literacy and numeracy. I don’t think Phys. Ed. is the only one. It has kind of slipped down...

I think it’s because literacy really is the push it’s the early intervention. Kids have got to be able to read and write, and so we seem to be looking at first steps training in reading and writing and spelling.

One third of primary schools surveyed who stated they were not presently satisfying the 100 minutes recommendation, expressed the view that the prioritisation of other subject areas over Physical Education was a key factor.

Primary school based participants were also aware of parental concerns, especially at Junior Primary level, for literacy skills to be developing and observable. This was seen as a priority by parents from their comments to teachers.

With the JPs all the brand new parents and even parents who’ve had their kids out for a year or two, all they want out of their kids, not all of them but a great part of them, they want their kids to be able to read and write and spell. That’s the first thing they ask at the end of the first week. ‘How’s my kid going with the spelling? How are they going with reading?’ They don’t ask how their kids are going with their PE skills.

How many parents complain to you at parent interviews that their kids aren’t doing well at fitness? (Brown, Lewis, Murtagh, Thorpe & Collins 1999, p.37 & 38)

It was demonstrated in Chapter 3 that the abstract artificial prioritising of some areas of learning over others exemplifies the elevation of the intellect over other ways of knowing and being. The results of this dualist view of a person, held by education leaders, have been division and fragmentation of school curricula.
Rebutting this point of view and promoting the concept of monism lies at the heart of this current study, which aims to identify opportunities for different and more relevant education frameworks in tune with the real nature of students in which reasoning, emotion and physical activity are inherently interconnected.

7.1.1 Demonstrated integration in the students

In Chapter 6 student memories were investigated to gain an understanding of how individuals go about gaining knowledge, dispositions and capabilities in their daily lives. It was evident from their recollections that the development of their concepts and conceptual structures occurred in association with emotional and bodily experiences in a way that connected life and action to nurture their spirit. Their examples highlight the acquisition of knowledge and skills that have enabled them to cope with their everyday life and adjust to rapidly changing situations.

Jamie demonstrated persistence and self-confidence to gain control over himself to execute the troubling dive. The hard work to overcome his anxieties and restore his self-worth enabled him to continue in life with great success in his sport and studies.

Katrina experienced the feeling of disharmony and loss when she was unable to do the things she was normally able to do, particularly tennis. She came to recognise when she was out of harmony and how to get back in balance. Through her experience she learned how to regain control, balance and self-confidence.

Michael learnt from his fishing trip that by facing his fears of being isolated and facing the unknown, that they could be overcome. He adapted to the unfamiliar situation in which he found himself, and gained new confidence to move forward in life on a career to become a commercial pilot.

Natalie learned to believe in herself and never to be scared. Her recollection of a swimming competition shows tremendous determination, a powerful melding of mind and body.

Jessica learned about trust - how to provide and receive assistance - from her dad; and about her own competence when she managed to ride her bicycle without training wheels. She gained a great sense of self-confidence, self-worth and self-esteem from completing the task.
Grace developed the ability to project her ‘self’ into the body of another person when her mother experienced being badly burned on a camp in the Greek Isles. She experienced the feeling of empathy and was able to express her mother’s life values in wishing the same would never happen to anyone she knew and cared about. She was able to communicate this empathy clearly.

The protection of personal well-being and the enhancing of others is a moral development that leads to self-protective behaviour. Rebecca experienced it when she fell off the garden swing because she was not correctly sitting on it. She developed a strong moral stance in doing it the correct way next time for her own protection in the future.

In getting dumped by a big wave at the beach, Kelly learned a complex lesson. Firstly, she had it confirmed that her father could be trusted to give the right advice – a very important step in moral growth. Secondly, she discovered the emotional rewards of risk taking, of challenging her environment.

Lisa developed a moral understanding about relying on others when she broke her arm on the fireman’s pole in the playground.

Through the intense emotional experience of being involved when a tent caught fire, Matthew felt the effects of the ebb and flow of energy as he responded to put out the fire. He was awakened to new capabilities within his body and felt confident that he could maintain control in an emergency. He was aware that his confidence needed to be tested and was eager for new and challenging experiences.

Charlotte persevered to learn lacrosse and overcome her anxiety at being put down by the class (mainly the boys). She grew in self-confidence and developed a passion for lacrosse and pushed into other recreation pursuits. Her experience enhanced her self-confidence and self-esteem.

Lucy overcame extreme anxiety to win two races and meet her own and external expectations as well as gaining great confidence to overcome small hurdles in life.

Tim experienced the highs and lows of emotion in playing baseball for his club. He chose to be with friends, although he was capable of being in a higher grade. This
decision enabled him to feel in a state of harmony and he felt satisfied that he had chosen to solve his problem in this way. His self-awareness was heightened to what he really wanted in life.

Eva separated herself from her parents in a defiant act to run through the streets of Venice. Reflecting on the experience, she realised that her physical activity represented a stage in the growth of her ‘self’.

Taken together, these examples demonstrate that from an early age students possess self-knowledge, can articulate accounts of their experiences, and can reflect on the complexity of their activities and personal growth. The students’ recollections express – either tacitly or expressly – profound insights into existential issues such as human pain and suffering, the finitude and fragility of human life, and about some of the moral dilemmas individuals face in daily life. More than this, the students are able to blend some of these themes into coherent statements that give clues to not only personal future directions but a host of more general social issues.

And all of the reflection, growth and insight are derived from or associated with physical activity because physical activity is an inescapable part of developing the self: “I hear and I forget”, “I see and I remember”, “I do and I understand”.

The students’ written memories demonstrate that they are monists. While their stories could be ‘unpacked’ in order to isolate emotion, reason or activity, no one of these things would have meaning without the others.

In Chapter 4 a case was developed to refute the conceptualising of students as being mind-body separated in nature. Implementing learning experiences based on a concept of a person where knowledge and practices are disjointed, devoid of human motion and emotion, would be meaningless and irrelevant to students.

7.1.2 Evidence of dualism/monism tensions in Australian education frameworks

Considerable debate continues at local, national and international levels regarding the construction and management of education frameworks that best develop knowledge, skills and dispositions in students so that they can successfully cope with a rapidly changing world. However, problems arise due to the increasing dominance of abstract

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instrumental intellectualising described in Chapter 3 by Fitz Clarence as intellectual technique, in which "...the body becomes more under the control of the ego, and following this to its extreme means that physical activity may become not needed at all, or nothing".

Under these conditions, ways of being and knowing as an integrated monist are continually diminished and there are fewer and fewer points of resistance to counter the education trends that are dominating all advanced industrial societies. These trends privilege the ‘superior’ academic subjects to the detriment of the physical subjects and to the detriment of the developing young person.

Australia first adopted a set of national goals for schooling in 1989 when education ministers from all states and territories and the Commonwealth met as the Australian Education Council and adopted Common and Agreed National Goals for Schooling in Australia. The ten national goals were intended as a set of objectives which would assist each school and each system in the development of specific objectives and strategies, including objectives and strategies in the areas of curriculum and assessment. The first update of the goals occurred in 1996 when Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) agreed to the addition of a new goal regarding literacy. The new goal was further amended to include numeracy, before a complete and major review of the goals began in 1998.

Following a process of wide consultation, the review was completed in 1999 when MCEETYA endorsed the Adelaide Declaration of Australia's National Goals for Schooling in the Twenty-first Century (MCEETYA 2003). Among other acknowledgements, the Declaration stated:

- It acknowledges the capacity of all young people to learn, and the role of schooling in developing that capacity. It also acknowledges the role of parents as the first educators of their children and the central role of teachers in the learning process.

- Schooling provides a foundation for young Australians' intellectual, physical, social, moral, spiritual and aesthetic development. By providing a supportive and nurturing environment, schooling contributes to the development of students' sense of self-worth, enthusiasm for learning and optimism for the future. (MCEETYA 2003, Preamble)
The purpose and value of the national goals of the Declaration were also described:

These national goals provide a basis for investment in schooling to enable all young people to engage effectively with an increasingly complex world. This world will be characterised by advances in information and communication technologies, population diversity arising from international mobility and migration, and complex environmental and social challenges. (MCEETYA 2003, Preamble)

The goals comprehensively outline the ways in which schooling should develop fully the talents and capacities of all the students before they leave school. In terms of the curriculum, the Declaration stated that the students should have attained high standards of knowledge, skills and understanding through a comprehensive and balanced curriculum in the compulsory years of schooling encompassing the agreed eight key learning areas and the interrelationships between them. As well, the students should have attained through the curriculum the skills of numeracy and English literacy, participated in programs of vocational learning, and programs and activities which foster and develop enterprise skills.

However, at the same time as MCEETYA adopted the Declaration it affirmed its commitment to national reporting of comparable national outcomes on the revised National Goals. It selected six areas, including literacy, numeracy, student participation and attainment, vocational education and training (VET) in schools, science and information and communication technology (ICT), and directed that work commence on the development of performance measures for civics and citizenship and for enterprise education. Key performance measures were developed in each of the six areas nominated by MCEETYA.

The Declaration serves as an example, therefore, of the mind-body dualism and the dualist-monist tension in education. While espousing broad ideals, it re-inscribes a testament to cognitivism and the instrumental use of education in Australia. National tests for literacy and numeracy are artificially devised for accountability and funding imperatives in a move aimed to achieve greater national control of education and greater economic efficiency in the sector.
The point is re-emphasised by Ellerton and Clements in relation to the introduction of national testing and focussing on privileged education areas.

There is certainly an important and difficult curriculum challenge facing Australian educators – specifically, that of developing curricula which meet the needs of all students yet do not result in a decline in standards. However, it is unlikely that outcomes-based education procedures, which derive from an industrial metaphor, can adequately address the question of equity. Schools are not factories, and devising curriculum policies that treat children as inputs and behaviour as outputs represents, in itself, a firm moral stance pregnant with values that would be unacceptable to many Australians. (Ellerton & Clements 1994, p.66)

Moreover, as early as 1989, The Australian noted in an editorial that Australian schooling had ‘...suffered greatly from the atomising and trivialising of the curriculum’, as previously observed when discussing the fragmentation of physical education; and the curriculum continues to be atomised and trivialised.

Considerable debate among Australian educators demonstrates the dualism-monism tension. This was epitomised by the 2002 Curriculum Corporation’s Conference, New Radicalism: Making Education Priority, which revealed the relentless trend toward reducing educational experiences to core numeracy, literacy and information communication technologies (ICTs).

Taking a line through the Conference deliberations, the dominant education discourse appears to be closing solidly behind the view that less should be experienced in more depth, as expressed by Wilson. This discourse advances a reducing circle of experiences in learning areas characterised by abstract instrumental intellectualising to elevate Mathematics, Science, Technology and Languages to positions of significance for students. Success in these disciplines is expected to produce success in a rapidly changing world.

Other speakers at the Conference did challenge these sorts of views, highlighting the monist-dualist tension among the Conference attendees. Bentley, for example, proposed that there were several avenues that stood out as offering great potential for accelerating progress and aiding in longer-term renewal and reinvention for education in Australia. He argued for a broader view than outcomes and knowledge-based
learning experiences for the students, a view that focuses on the development of wider life skills within the learners.

Reshaping the core curriculum so that it offers greater potential to equip learners for lifelong learning, develops the generic skills and disciplines they will need, and ensures access to deeper, more enduring forms of understanding which they can use in a wider range of contexts, including the workplace and this is only likely to happen if the core content requirements of the school curriculum, and the highly standardised ways in which they are defined, can be reduced. (Bentley 2002, p.7)

Another speaker at the Conference asserted that Bentley’s challenges for the future did not go far enough ‘... in the face of a long history of ill-advised, top-down, centre-periphery implementation model prescriptions for school change’ Brennan (recorded in the Report of the Ninth Annual Conference of the Curriculum Corporation, 2002, p.8). She proposed extending the challenges facing education through a more holistic and connected learning approach for students.

Most of the information taught in schools is relatively abstract and arbitrary, not necessarily even worthwhile. And the testing and accountability regimes are not helping to broaden the range of content, skills and approaches beyond the narrowest forms. Let students learn and do something worthwhile, as Bentley advocates, in a wide range of places, but first let’s clear up why more of that is not happening. (Brennan, cited in the Report of the Ninth Annual Conference of the Curriculum Corporation 2002, p.9)

The fact that Australian education leaders offer such differing views illustrates the tension between monist and dualist approaches in education currently.

7.1.3 The outmoded concept of dualism in the curriculum
To develop and practice education frameworks with a dualistic view of a person, as illustrated by the Declaration and the views of educators such as Wilson, bases the development of education frameworks on an outmoded concept. New physical, neurological and cognitive research such as that undertaken by Lakoff and Johnson (1999), Damasio (1994; 1999), Salovey, Mayer, & Caruso (2000), Fitzclarence (1990) and Ross (2001) provides a credible and significant rebuttal to the idea of the nature of humans as dualist.

Therefore, arbitrarily defined bodies of knowledge that are privileged apart from bodily experiences are not in accord with the nature of being human, which is
quintessentially monist. Thus, bodies of knowledge that are of great importance in a
society will be rendered less meaningful and less relevant to the bulk of the society
unless and until they can be connected holistically to life experiences and learning
processes within the learner.

Policies that support and nurture the integrated mind-body learner do already exist in
Australia, although their importance, direction and potential are not currently being
realised. The South Australian Curriculum, Standards and Accountability
Frameworks (SACSA) challenges physical education providers to provide a physical
education curriculum for the integrated learner, while also providing them a
framework within which to work. The Frameworks emphasis on holistic instruction
and curricular connectedness, however, is little understood by the South Australian
education community. Moreover, the pressure for accountability and costing requires
that educators value reductionism and atomism because these are what are held as
being important for them by education authorities. As a result the deep underlying
value and potential of the SACSA for the integrated (monistic) learner are not
accomplished.

A counter approach that recognises the opportunity available to the integrated learner
in the Framework will be examined in the following sections.

7.2 Education policy and programs for the integrated learner

In 2001, the curriculum leaders of the South Australian Department of Education,
Training and Employment (DETE) [now the Department of Education and Children’s
Services (DECS)] introduced a more holistic life skills approach into the SACSA
Framework, calling the new inclusion Essential Learnings. The Learnings focus on
the development of knowledge, skills and dispositions in students as personal
resources to best equip them for changing times in their school and particularly, post-
school lives. They have been identified as essential personal developments in the
students to meet future challenges in uncertain times.
These understandings, capabilities and dispositions are personal and intellectual qualities, not bodies of knowledge, and they are developed throughout an individual’s life. They are intended to broaden the options for, and so enrich the lives of, all people in our society. (Department of Education, Training & Employment (DETE) 2001, p.13)

At the time of the introduction of the Learnings, there were in place SACSA writing teams that had been formed for each of the eight learning areas, into which the Essential Learnings would be incorporated. Each team consisted of one practising teacher and one academic from the relevant discipline area. The team was accountable to an expert working group (EWG) composed of members from the tertiary sector, relevant professional associations, teachers in the early, primary, middle and senior years of schooling, the Catholic Education sector, the Independent Schools sector and key experts coopted according to specific tasks.

One of the tasks of the expert working groups was to provide targeted advice with respect to the development of curriculum areas and cross curriculum areas within the framework. In the case of the learning area of health and physical education, the expert working group strongly advocated for healthy active living as the major emphasis. This advocacy led to the learning area committing itself to the statement: ‘Health and physical education is concerned with learning about, and through, healthy human development and change’ (DETE 2001, p.89).

When the Essential Learnings were included in the Framework, an opportunity to demonstrate the benefits of physical education presented itself. The expert working group reacted quickly and positively to the new emphasis. The nature of health and physical education made it easy to relate human motion to developing such life skills as cooperation, listening, decision-making, effective interpersonal relationships, positive personal and group identities and so on.

The emphasis on Essential Learnings in the SACSA Framework provides a way to challenge –perhaps supersede – the outmoded concept of dualism that continues to influence curriculum development and administration in the education sector. The Learnings, with their attention to whole of person development provide a ‘window of opportunity’ for greater acknowledgement and use of human motion in education frameworks.

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The findings from the current study demonstrate that emphasis on education for life must include emphasis on human motion. Physical education is positioned by its very nature to assist in achieving the Essential Learnings across the curriculum. The hitherto unacknowledged, unexplained and unexplored fundamental involvement of human motion in the core functioning of a person offers modern educators new ways to perceive learning and the learner, and new ways of teaching. The Essential Learnings approach of the SACSA Frameworks enables wider life opportunities involving bodily experiences in learning programs for students. This active learning has the potential to re-energise and make learning more relevant and engaging for students.

7.2.1 The Essential Learnings

A sustained process of generative development involving discussion groups, expert advice, teacher, parent and student consultations, and workshops, identified five categories of Essential Learnings that received consensual agreement within the Department of Education, Training and Employment (DETE). These cross-curriculum perspectives are generic categories that are described as overarching understandings, dispositions and capabilities developed throughout life and to which all learning areas must contribute. As such, they highlight the need for a framework of learning that is very general and applicable to learners in different contexts and in different phases of life.

The Essential Learning Areas were identified as those required to best meet future challenges from the perspective of Futures, Thinking, Identity, Interdependence and Communication.

The discussion of the five categories of Learnings that follows illustrates the breadth and nature of the emerging education framework within which the learning areas can be drawn together and reveals the potential for the wider influence of human motion in education.

In the exposition that follows, some of the aspects of reasoning connected with each category of Learning are described. Several of these aspects reveal remnants of
Enlightenment thinking and the involvement of human motion extends their scope and meaning. These contributions are indicated in brackets. The aspects provide opportunities to conduct more informed selection of experiences of human motion to enhance the Learnings and associated learning in students. The choice from an enormous array of expressions of human movement including different intensities, levels of risk and social characteristics provides a renewed challenge for educators, particularly physical educators and opportunities for considerable future research.

The Learnings are described in the SACSA Framework as:

...understandings, dispositions and capabilities which are developed through the Learning Areas and form an integral part of children’s and student’s learning from birth to Year 12 and beyond. They are resources, which are drawn upon throughout life and enable people to productively engage with changing times as thoughtful, active, responsive and committed local, national and global citizens. Engaging with these concepts is crucial to enhancing the learning culture within and beyond schools/sites.

(Department of Education, Training & Employment (DETE) 2001, p.15)

The following descriptions of the Learnings and their developed understandings have been oriented towards the involvement of human motion and emotion in the reasoning entailed for each aspect. This has been done to emphasise the scope for a broadened perspective of human motion in education.

EL1: Identities

The learners develop through bodily experiences:

- a sense of personal and group identity
- capabilities to contribute to, critically reflect on, plan and take action to shape relationships.

They gain an understanding of:

- self, groups and others
- the social construction of identities
- relating effectively to, and collaborating with, others regardless of their identities.
EL.2: Futures

The learners develop through bodily experiences:

- a sense of optimism about their ability to actively contribute to shaping preferred futures
- capabilities to critically reflect on, plan and take action to shape preferred futures.

They gain an understanding of:

- patterns and connections between systems
- world views when analysing future challenges (both Eastern and Western)
- building scenarios for preferred futures
- lifelong learning.

EL.3: Interdependence

The learners develop through bodily experiences:

- a sense of being connected with their worlds
- capabilities to contribute to, critically reflect on, plan and take action to shape local and global communities.

They gain an understanding of:

- cultural and global connections, patterns and evolutions
- what is needed for sustainable social and physical environments
- acting cooperatively to achieve agreed outcomes
- taking civic action to benefit the community.

EL.4: Thinking

The learners develop through bodily experiences:

- a sense of the power of creativity, wisdom and enterprise
- capabilities to critically evaluate, plan and generate ideas and solutions.

They gain an understanding of:

- a wide range of thinking modes
- drawing on thinking from a wide range of times and cultures
- demonstrating enterprising attributes
- initiating enterprising and creative solutions for contemporary issues.

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EL5: Communication

The learners develop through bodily experiences:

- a sense of the power and potential of literacy, numeracy and information and communication technologies (as well as non-verbal, physical and visual expressions of communication)
- capabilities to critically reflect on and shape the present and future through powerful uses of literacy, numeracy and information communication technologies (as well as non-verbal, physical and visual methods)

They gain an understanding of:

- the complexity and power of language and data and their pivotal role in communication
- how communication works
- making effective use of language, mathematical and information and communication technology tools (together with non-verbal, physical and visual methods)
- using communication in a range of modes to achieve identified outcomes.

Significantly, this list constitutes a framework only. It is designed to provide both the structure and space for teachers and students to work together in a partnership agreement. As such, the list gives expression to holistic education, to monism, to the integrated and lifelong learning advocated by the current study and facilitated by human movement. Engaging with these concepts is crucial to enhancing the learning culture within and beyond schools and educational sites, which has considerable ramifications for formal/informal curricula and in-school/out-of-school activities for students.

7.2.2 The Essential Learnings and lifelong learning

The Learnings provide generic outcomes of personal understandings, dispositions and capabilities that are consistent with the view of acquiring life skills for lifelong learning through experiences in the five categories. A description of each category and an adaptation of the way they may combine in the learning ‘work’ of the students to generate life skills of knowledge, dispositions and capabilities within the emerging
education framework follows. The life skills are the personal resources to cope with the uncertainties, flexibility and rapid change in contemporary and future times.

**Identity** (ways of being) is seen as multi layered. It is a concept(s) of the self designed to give attention to the knowledge, skills and dispositions required in order to effect negotiation of meaning across various contexts of a person’s life. As such it is about the multiple ways of being in the world and of engaging with others. Closely aligned to this concept is the proposition that individuals are connected with others in many different ways.

**Interdependence.** Thus relationships involve complex forms of relational work (ways of relating and being connected). Individuals and communities are connected to each other as well as being connected to other cultural and indigenous communities. At the same time all other groups are constituted historically and as such have relations with others in the past and the future. Equally all human groups have complex relations of interdependence with non-social environments.

**Thinking.** In order to better understand one’s identity and relations with other human and non human environments it is necessary to have engaged in intellectual work (ways of knowing and understanding) about knowledge systems. Within increasingly interdependent environments, there is a need for forms of thinking that represent and develop concepts about other times, places, people and creatures.

**Communication.** Linked closely to intellectual work is the need for effective forms of communicative work (ways of expressing). In contemporary times this involves forms of information sharing that facilitate full engagement with the traditional forms of language skills and at the same time the literacies of the high tech information networks.

**Futures.** Given multiple ways of thinking and communicating about their different worlds of relations and interactions, individuals and communities are well placed to undertake futures work (ways of anticipating and creating change) to plan preferred personal and group futures.

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While each category provides specific foci, they combine in different ways to give expression to many forms of communication and understanding. This represents a multifaceted educational form that is able to incorporate a ‘mosaic’ of social, emotional, cultural, health and educational opportunities that are connected and give meaning for individuals and groups.

The Essential Learnings provide an insight into a new approach to learning and possibilities for human motion represented by physical and health education in the education frameworks of schools. They enable a view of the broadened paradigm of learning flowing across areas of knowledge absorbing unique health information and practices, whilst at the same time exerting a much broader influence over all of the other learning areas in the total education of the student through the informal or formal curriculum and school or community activities.

7.2.3 The Essential Learnings and monism

In order to move the monist conception of humans as mind-body integrated into the mainstream of educational thinking and practice, it would be useful to make the Essential Learnings the major rationale for each of the eight learning areas. This would not mean abandoning each learning area’s body of knowledge and expertise; but it would mean encouraging educators in each area to view teaching and learning, and learners, in ways to which they might be unaccustomed. The ultimate goal would be a unified and holistic approach to the writing of educational curricula, with each learning area contributing in its unique way.

There would be increased use of human movement across the curriculum to facilitate student achievement of the Learnings as teachers and teacher groups merged their specific content offerings to present an integrated learning experience for the students. The students would thus be provided the opportunity to acquire the Essential Learnings as personal resources that would increase learning capacities and the ability to cope with continual uncertainties and increasingly varied life options.

A broadened understanding of physical education as an essential element in human cognitive and physical growth has the potential to make the physical education learning area the ‘first among equals’. Associated with human movement, know
methodologies could be developed to make learning meaningful and relevant for students. Research would initiate new understandings into practical ways to create and implement integrated learning experiences.

Educational frameworks around Australia and the world are moving the acquisition of essential life skills into their centrality. In this context, human motion has the opportunity to be recognised for the important role it plays and to be fully incorporated into ‘active learning’ programs for students. It can move from being and end in itself, as often portrayed by physical education, to a fully acknowledged and utilised dimension of the education collaborations between teachers, parents, students and community bodies within the frameworks of each school.

Unfortunately human motion for the most part is currently disconnected from wider learning in the education frameworks of most schools. The aim of this inquiry was to find out why physical education is so marginalised, and how a reconnection with the current educational core can be effectively managed. As a result of the current study, therefore, one small step toward the reconnection with human motion by developing a better understanding of the important role it plays in everyday life has been taken.

Active learning has been a pedagogical approach of a small number of teachers who have always felt this connection and practised it for many years. Proliferation of new understandings exposed by this inquiry will be very reassuring and supportive for them. The fragmentation of knowledge and practices in physical education and the decline of physical education as a subject central to student experiences has been for the most part the result of unwittingly dualist policies advocated by education authorities. However, the outcome has been that the students disengage from learning in this fragmentary fashion and for them schooling becomes irrelevant and boring.

The challenge before educators, particularly physical educators, is to increase their understanding of the important fundamental role of human motion in learning and develop management strategies within their own education sites and communities to reduce, and if possible eliminate, the disconnectedness of human motion in the education of their students. The benefits for learning and engagement with learning-as-life skills are enormous.
7.2.4 The challenge of the SACSA Framework

The South Australian education community has been challenged through the policy of DETE to make learning relevant and effective for students through the SACSA Frameworks, incorporating the Essential Learnings. Several excerpts from the Frameworks underline the need for educators to match learning programs to the needs, interests, expectations and aspirations, as well as the strengths, areas requiring improvement, and learning preferences of the learners:

The SACSA Framework is a flexible framework that relies on the professionalism of educators to devise curricula which meet local requirements, and which are tailored to the specific needs of learners. Its parameters are deliberately broad in order to encourage varied pedagogical approaches. (Department of Education, Training & Employment (DETE) 2001, p.28)

And:

The invitation offered by the SACSA Framework is for the South Australian educational community to continue the tradition of ongoing dialogue and debate about the curriculum. The implementation phase of the SACSA Framework marks a beginning to the process of curriculum renewal. It signals the start of a new round of exciting curriculum debate and action, which will benefit learners and is the lifeblood of a dynamic education system and a healthy democracy. (Department of Education, training & Employment (DETE) 2001, p.33)

It is in the spirit of this invitation by SACSA that the current study works toward exploring ways to enlighten the school community and educators, particularly physical educators, of the profound importance of movement experiences to the shaping of the monistic individual. Movement not just for physical health or skills, but for personal growth – moral, mental, spiritual. Sensorimotor experiences derived from a limitless range movements including sports, dance, gymnastics, aquatics, massage, combatives, drama, cycling, hiking and other outdoor challenges provide, through activity and context, opportunities to develop or enhance the richness of life skills such as persistence, commitment, courage, communication, cooperation, and self-knowledge.
It is not that activities of this sort are unlikely to be done. At some stage of a young person’s education, most will have engaged in some type of physical education — either in or out of school. It is that the significance of what is happening at the core of the individual within the context of activity remains unappreciated due to its very private and internal nature. Educators, parents and students themselves are unfamiliar with the concept of monism and with the idea of an embodied mind developing concepts and conceptual systems everyday from activity experiences. Fostering an understanding of this emerging view of mind-body symbiosis could prove to be a very great challenge for those attempting to revise the physical education sector.

The implications for future professional development and research into the value of activity experiences in providing students with the resources to cope with a life of options are, therefore, numerous.

7.3 **Evidence of monistic school practices**

Two examples of integrated learning opportunities that better cater for the monistic nature of learners are provided in this section. They emerge from reports developed about them that highlight the benefits and future challenges for connecting human motion, emotion and reasoning in integrated learning experiences that cut across various sites of school, local community and the wider outdoors.

7.3.1 **Nurturing monism through dance: The Croc Eisteddfod**

A report of the 2000 Croc Eisteddfod by Allard, Fitz Clarence, Nakata and Warhurst provides a good example of an initiative demonstrating education involving ‘community connectedness’ within an education framework that combined health and education. The Croc is one social activity in the complex education of social, political, cultural and educational influences in the lives of Cape York/Torres Strait people (Allard, Fitz Clarence, Nakata, & Warhurst 2001).

The Croc is primarily a community-based event rather than a school-owned event. It is organised around, and is dependent in the first instance on, school commitment as the activity occurs largely in the school and education context. However, the festival could not occur without the support and expertise provided by Indigenous Festivals Australia.
The Croc employs rock music and modern dance techniques, propagated by the mass media and a significant part of youth culture, as the medium for exploring different social themes and offering social commentary. It is an event based around human motion including dance, music and selected narrative. The Croc is a multifaceted educational form that provides ample scope for the students to gain Essential Learnings as personal resources for lifelong learning. The Learnings combine in different ways to give expression to many forms of understanding and communication. By way of example, the following school performances taken from the Allard et al. report illustrate particular emphases in one or more areas of the Essential Learnings.

Lockhart River's performance of Traditional Culture, Laura State School's Cultural Change in the Millennium, and Cairns Alternative School's Many Cultures One People, all gave expression to the close link between learning about ways of being and relating. From a different perspective Kowanyama State School's Kowanyama-Place of Many Waters and Koolkan Aurukun Community School's Rumble in the Jungle highlight understandings about the intimate relationships between people and place and in that sense a different expression of connections. Working from another somewhat different perspective again, with a quite different focus, Jessica Point State School's Life Distractions and Choices, and Weipa North primary school's Ring Ring are examples of performances with a strong emphasis on effective forms of interpersonal and group communication. (Allard, Fitzclarence, Nakata, & Warhurst 2001, p.49)

The Croc as an educational medium. In their report, Allard et al. (2001) made observations of the educational principles operating within the Croc that work to further 'community connectedness'. They also made recommendations on ways teachers might use the medium of the Croc festival in innovative ways to flow across the knowledge and skills of the eight key learning areas present in education frameworks in the schools of the region.

Through their observations they saw evidence of direct links being made by teachers with the eight learning areas, but it became increasingly obvious that the Croc was a learning medium that extended well beyond the formal curriculum. Being a social and expressive activity, it employed forms of communication and fostered skills and capacities that are generic in nature and consistent with ideals of lifelong learning. As
a result, they employed the term ‘community connectedness’ to give expression to the form of education with which the Croc was involved:

More specifically this study has revealed ample evidence of a host of important generic ‘educational’ outcomes. These include, enthusiasm for participation in a long term task, commitment, leadership, responsibility to self and others, practising skills with an aim to excellence, self-discipline, listening, concentration on task, cooperation, working with others, self-confidence, participation in group work etc. These are the social skills generally associated with behavioural and attitudinal measures and are legitimate educational goals themselves. They are skills that appear on most school reports via comments or scaled measures. They are skills that are necessary to operate effectively across formal learning and other social/educational contexts. (Allard, Fitzclarence, Nakata, & Warhurst 2001, p.43)

They argued that a future aim for teachers and schools should be to build on the gains the students make in these social areas through their participation in the Croc and transfer them more generally into more formal contexts for learning. They asserted that the Croc provokes consideration of how to plan learning strategies for other curricula areas that reinforce, make use of and further develops these necessary skills. They recommended that more research be conducted to monitor the work associated with the Croc linking back into the key learning areas. As a confident observation they thought that the enthusiasm displayed by the students in the Croc would flow through into teachers making greater use of the generic Learnings within the eight key learning areas of the curriculum.

Their report highlighted that the Croc needs to be more thoroughly investigated if its importance and value is to be better understood in the lives of the students, parents and teachers of the communities where it was conducted.

They recommended that more action research be undertaken to investigate the ‘whole school approach’ potentiated through such an event. This research would collaboratively monitor, evaluate and reflect on the processes of teaching and learning, curriculum development and assessment procedures. The comprehensive documentation of these processes would provide very useful guidelines for other
schools to use in their own contexts. Specifically, the research would establish better ways of understanding the complex links between:

- the formal in-school curriculum and the informal, out-of-school experiences and offerings, in particular the links between community aspects of the Croc and different components of the key learning areas of the formal curriculum
- the extent to which the messages and knowledge generated by the Croc are taken on board by the students in a meaningful and lasting way.

Allard et al. (2001) reflected on the strategies associated with the Croc to understand why it works as successfully as it does. They believed there was strong evidence that the Croc was based on sound educational principles. It was their belief that sound pedagogies involved in the Croc practice made it as successful as it is and identified educational principles underpinning the Croc Eisteddfod as follows:

**Exemplary education principles for the Croc.** The underlying sound education principles demonstrated in the Croc provide a template of practice that epitomises the wonderful potential for human motion to be integrated across the learning areas, particularly the myriad of activities encompassed by physical education.

1. **Student 'ownership' of and engagement in meaningful learning.**
   The performances and participation are built around students' interests, what they want to say, and what they see as important. This contrasts with much of the 'formal' curriculum that often is decided upon solely by adults and/or disconnected from students' own concerns.

2. **Learning by active involvement.**
   Participation and not winning is valued and encouraged. Wide ranges of ways are offered to the students to contribute to the Croc. Developing the dances, helping with the set construction, moving the props, staffing the food stall, dancing in public, joining in the myriad of activities—all are seen as worthwhile and valuable. Different activities contribute to skill and knowledge development. Learning is connected to real life events, not abstracted and disembodied.
   
   Additionally, successful participation is dependent on the teamwork and group cohesion and means that the outcomes of learning are inseparable from the process—not add-ons.

3. **Learning outcomes are connected to the world 'outside' of school.**
   A public event provides a forum for the students to 'speak' about what they believe, what they care about and to demonstrate what they have learned. In this
public forum, they are ‘listened’ to and taken seriously by their peers as well as by adults.

4. Students’ learning experiences are valued and treated with respect.
   The student performance, the outcomes of the work they have done, are treated as ‘professional’. Lights are trucked in, scaffolding is put up, a sound system is used, videotapes are made, so that what they have to ‘say’ is resourced in a way that honours and is respectful of the time, effort and ideas that they have invested.
   Adult attention, time and willingness to expend resources validate students’ work and make clear that such work matters. Additionally, that the means to convey their ideas is one that is drawn from popular youth culture is significant. They are given voice through a medium that is relevant and pleasurable for them. Through attendance at the Croc, adults acknowledge that such a medium of youth culture is worth attending to.

5. Learning is viewed as connected and relational.
   The students’ own communities come together in celebration and by bringing the community together to see their performance, the students are able to contribute to the well-being and knowledge of that community in new ways. They are treated, and perform as responsible and significant contributors to the ‘wider’ world. An important aspect of this connected, relational learning centres on the sense of ‘fun’, the shared laughter that underpins the preparation for and participation in the Croc Festival.

   There is an audience with whom to share their knowledge/learning. At the most direct level, the ‘audience’ for the students’ skills and ideas are the friends and family who gather together to witness the performances. At a deeper, more indirect level, the students’ ideas, skills and experiences presented through the Croc are taken up and discussed, dialogued about long after the actual performances.

   In the ongoing discussions within their communities, in the post-Croc work they back in their schools, in the friendships they establish with others who attend and participate at the Croc, in the press coverage both in and outside the Weipa area, the students’ ideas can be discussed, debated, remembered and acknowledged by a much wider audience than those who are present on the nights of the performances. It is possible to argue that in this ongoing dialogue, the processes of reconciliation are also enacted. (Allard, Fitzclarence, Nakata, & Warhurst 2001, pp.30-51)

The Croc provides a good working example of an education experience that develops ‘community connectedness’ within the health and physical education learning area. It exemplifies the nature and broader appreciation of human motion in education.
creating opportunities that enable students to move across areas of knowledge and skills to engage them when and where appropriate.

7.3.2 Nurturing monism through interaction with the environment: Outdoor education in South Australia

A second example of an integrated learning experience is that of outdoor education conducted in schools as part of the health and physical education learning area. Outdoor education is a program where the endless possibilities of educational experiences in a variety of outdoor sites have the potential to expose students to deeper learning in numerous cognitive, social and physical areas in an approach involving active learning. This potential is highlighted in a report describing the status of outdoor education in South Australia.

A 1999 investigation of the nature and scope of outdoor education in South Australian Secondary Schools was conducted by University of South Australia Honours student Bronte Pickett, who discovered that bushwalking and canoeing/kayaking were the most utilised practical tools in outdoor education programs. Pickett described the outdoor education field as:

... widely perceived to have significant benefits for those who participate, on personal, group, social, and environmental levels. Within a school setting, the field of outdoor education encompasses a diverse range of possible alternatives – year level camps, various subject excursions to outdoor areas, activities within physical education, Outdoor Education as a subject in its own right, and extracurricular outdoor or adventure activities. (Pickett 1999, p.1)

Outdoor education/physical education coordinators and principals from 225 secondary schools were invited to participate in the study. Responses were received from 63% of the coordinators and 49% of the principals and were deemed representative of government and private South Australian secondary schools.

The participants were asked to list the most highly developed and valuable outcomes from the outdoor education programs in their schools. The data show how outdoor education works to realise the goals of the Essential Learnings.
These were as follows (NB these outcomes are not in any particular order):

*improved self-esteem*
*increased personal responsibility*
*improved social relations with peers*
*improved group communication*
*improved relationships with staff*
*increased cooperative behaviours*

These were also the outcomes perceived most highly developed and most valuable by the principals who responded.

The learning outcomes perceived to be the least developed through outdoor education were also considered least valuable. These were as follows:

*improved academic performance*
*improved physical fitness*
*involvement in environmental action/conservation*
*increased knowledge and values*

These were also the outcomes perceived to be least developed and least valuable by the principals. In addition to these, improved environmental appreciation was another outcome considered least developed and least valuable. (Pickett 1999, p.63)

This research was undertaken because of growing concern about the quality of Outdoor education programs conducted in South Australian secondary schools. The results highlight one of the concerns of the current study in relation to the understanding of the developmental learning processes involving human motion.

In particular, it illuminates the rich development of life skills, as expressed in the Essential Learnings, as personal resources through outdoor education experiences. However, the application of these skills to engage with other learning areas of schools' programs is not well developed. In this sense, the life skills being progressively acquired by students are not fully utilised nor built upon to meet new challenges and connect across the curriculum.

As a result of the findings of the current study, more assistance is available to outdoor educators who passionately believe in the value of their outdoor experiences for students. Heightened awareness of the scope and the value of the outcomes produced by outdoor education will help them understand the full impact of the learning experiences they create and encourage them to make closer links with colleagues to connect across other learning areas of the curriculum.
They will be in a position to prepare better arguments concerning the enormous potential of the opportunity they create for their students. The life skills developed that are so easily recognised and espoused in Pickett’s investigation by teachers and principals should enable the students to connect with other learning areas in active learning that has greater relevance and meaning for them. In turn, the personal resources that these life skills represent can be further developed and refined to facilitate students’ participation in other areas of interest and passion.

In other words, the experiences provided by outdoor education initiatives develop insights and attitudes that can be harnessed to engage with some or all of the learning areas in school programs. Were awareness of how activities such as those provided by outdoor education assist in the construction of the integrated learner more widely understood, understanding would alter the perception of those educators who feel that neither ‘knowledge and values’ nor ‘improved academic performance’ have taken place during a physical education experience.

An innovative cross-curricular approach would more favourably position outdoor education in South Australia and re-energise its offering in schools. Failure to demonstrate the important part outdoor activity can play in developing the whole, integrated self – body, mind and spirit – might mean that outdoor education falls further and further behind the other learning areas in many schools:

The question that now remains is not whether, but when the research results can be put to use to assist in the future development of Outdoor Education in South Australian secondary schools. With an awareness of these results, it might be argued that current conditions are conducive to proactivity and development. If the opportunity is ignored, however, there is always the possibility that Outdoor Education in many secondary schools may not get another chance to prove itself for some time. (Pickett 1999, p.127)

It is clear from the investigation into outdoor education that the generic ‘educational outcomes’ of increased responsibility, cooperation, improved communication, working with others, self-confidence and so on, provide for the student a rich resource of social and life skills necessary to operate effectively across formal learning and other social or educational contexts.

Enormous opportunities for shaping the integrated person are presented through the myriad of in and out-of-school activities including productions, sports carnivals,
camps, excursions, sporting exchanges, dance festivals, formals, school expos, pedal prix, interschool sport, intra-school sport, yard games and so on. Physical education lessons provide a rich source of ‘active learning’ in which life-skills and lifelong learning attributes can be built on and used by all of the learning areas. Human motion itself has a body of knowledge with which the students can engage at appropriate stages for health and connection to the ‘movement culture’ (Tinning, Macdonald, Wright, & Hickey 2001).

7.4 What’s in a name?

One of the major intentions of the current study was to clearly identify the origins and highlight the deleterious effects on physical education of conceptualising a person as a mind-body separated being. When the body is regarded as subservient to the mind, commoditisation of the human body is always a danger, as is the conceptual fragmentation of the person and the body.

The name physical education when taken in the context of this inquiry connotes the education of a ‘physical’ self, thus reinforcing the dualism. The well-known descriptions of physical education being ‘through’ and ‘of’ the physical, amplify the notion of duality. The notion is countered, however, by new scientific insights into the in the formation of concepts and metaphorical thought through sensorimotor activities.

A curriculum conflating movement, thinking, feeling and social relationships would be more closely matched to the needs of students viewed as integrated beings. An example of this more effective form of educational integration is that of the Scitech Eisteddfod in the Rock Eisteddfod (Fitz Clarence 1999). In 1997 the Scitech was introduced as a sub-section of the main Rock Eisteddfod competition to encourage schools to use their Rock Eisteddfod production to dramatise science themes and events. As such the Scitech rewarded schools that clearly demonstrated an awareness of science and technology issues. In summarising about the Scitech, Fitz Clarence noted:

The consistently spectacular performances of schools competing in this event are suggestive about future trends in education. The multi-visual performances of different themes provides the opportunity for schools to engage in curriculum in keeping with the multi media world of the 1990s.
As such social commentary is combined with technical innovation and the performance routines of popular rock culture.

And:

…one judge has observed that students’ ‘understanding of science is marvellously sophisticated’ and another reflects that ‘…if you look at what the kids are into at the moment, if you look at their free time, it’s all science based…’ (Fitzclarence 1999, pp. 2 & 3)

This approach to educational experiences for students presents challenges to the way school curricula are currently organised and assessed. It represents the need for a complete orientation toward centralising the development of the Essential Learnings, with more flexibility within the school’s education frameworks to maximise the potential for learning through a variety of means.

Movement education. To more accurately represent a profession, the major purpose of which is to stimulate an array of human motion during the education of the students, movement education, although it was used in the latter half of last century, seems a more appropriate name. It portrays the essential interconnection between movement and education – the intertwined nature of physical activity and understandings of the self, others and the social and natural environment.

There have been ongoing debates and tensions surrounding the name physical education (Bouchard 1992) and to this point in time it has survived. The current study challenges the continued use of the name and advocates the more representative appellation of movement education for the profession.

Future research is warranted to more accurately identify the nomenclature of the profession based on the broader understanding developed in the current study that in turn broadens the appreciation of the profound nature of the learning area.

7.5 Chapter conclusion

In a complex world of rapid change, people and human motion have become disconnected through the influence of ideologies and practices associated with a view that a person is a mind-body separated identity. Through the current study I have endeavoured to gather evidence to support the view of a person as mind-body integrated and demonstrate the urgent need for managing change to reconnect human
motion to people because of the profound and inextricable relationships between bodily experiences, emotions and reasoning. This has entailed a review of contemporary theories and research knowledge which, when combined with evidence from students across the bands of schooling, provides new and confirming understandings of the ‘embodied mind’ nature of being human.

Without conscious reference to new research in cognitive or neuroscience, the recently promulgated SACSA Frameworks have identified five Essential Learnings that should be satisfied in eight key learning areas. These Essential Learnings are the sum of what can be achieved by learners who are given the opportunity to combine movement with the stillness of reflection and with traditional or emerging bodies of knowledge, ranging from mathematics to Information Communications Technology.

That is, the Learnings identify what is central to the learner’s success as an individual and a member of a wider community – identity, relationships, ways of thinking, communication and the capacity to deal with change now and in the future. New revelations in cognitive science and new arguments in philosophy indicate that physical activity contributes significantly to the adoption of these Learnings.

Acquisition of understandings, dispositions and capabilities related to a desirable future, different ways of thinking, strong positive personal and group identities, responsible interdependence and effective and appropriate modes of communication represent life skills necessary to cope with continual change and enhance engagement with learning. These personal resources provide the capabilities to both increase life’s options and to successfully adapt in day-to-day living. Within this framework new partnerships of active learning can be forged between students, teachers, parents and other people in the community to use these developed or developing personal resources to cope with a world of rapid change. These are lifelong learning skills to successfully pursue vocational, recreational or any other pursuits in present and future living.

Examples of this conceptualisation and its potential are provided in the 2000 Croc Eisteddfod and outdoor education in South Australia. Both had the development of personal resources as a central outcome, resources that could be channelled into diverse educational areas to grow the participants’ physical, intellectual, moral and spiritual characteristics.
As education frameworks adopt the learning of essential life skills as their centrality, physical education is being provided with an opportunity to assert its potent contribution to the development of well-rounded, confident and life-engaged individuals. This moves to centre stage "active learning" opportunities that invoke the rich and inextricable relationship of human motion and emotion and reasoning.

In the light of this move of active learning to centre stage, along with new insights into human growth and development, a new appreciation of humans as monists and with a move to a core focus on Essential Learnings rather than static bodies of knowledge, it would be an opportune time to change the name of the learning area now referred to as physical education.

This appellation does not truly represent the nature of the profession. The interaction between activity, emotion and reason and the very broad range of activities that could be involved might be better expressed by the term movement education.

To ignore the opportunity presented by the findings of the current study would be to condemn the profession to a limited and even more diminished place than it now holds in educational curricula. Making the most of the powerful concept of monism and of the current emphasis on developing aptitudes and attitudes that allow lifelong learning have important implications for physical education that will be addressed in the concluding chapter that proposes recommendations for change in the professional area.
Chapter 8

Conclusion

The purpose of this research was to examine the reasons for the failure of physical education to sustain its identity and value in Australian society, why physical education is compromised and how the situation can be better managed to increase the sustainability and broaden the paradigm for physical education.

This final chapter reviews and discusses the findings of the current study in relation to the identity of physical education, the pervasiveness of dualism and the effects of the intellectualisation of physical education on the learning area. In doing so, it looks at the reawakening and reaffirming of the ideas of integrated being and monism, the notion of the embodied mind. It reasserts the suggestion that the SACSA Frameworks’ Essential Learnings offers an opportunity for physical education to become more central in school curricula; and suggests a change of name for the learning area.

8.1 Loss of identity

Numerous formal investigations at state, national and international level have confirmed that physical education as an area of learning is being subsumed by its nominal partner, health, and generally experiencing a narrowing of its identity in the school curriculum. Focussing on physical fitness and health-related aspects of fitness, there is only minimal connection to overall learning in students. The wider learning outcomes from activity experiences have not been well understood and, hence, not clearly enunciated.

The current study has identified the disassociation of people from human motion, and the potential harm that can cause. Without physical activity, the capacity to feel wholeness is missing, but the memory and desire to attain it are still very much alive, deep within people, usually without conscious recognition of the causes of their discomfort. The research for the current study provides clues as to where to begin to look for both the causes and solutions to the associated issues of physical education’s loss of identity and the individual’s loss of wholeness.
8.1.1 The pervasiveness of dualism

A centuries-old concept that pervades Western philosophical discourse portrays the mind and body as separate entities. Mind-body dualism permeates beliefs and practices associated with religions, medicine, science and education. Despite intellectual advances since the 17th century, many philosophers have only refined the dualist thinking laid down by Descartes and in the main have chosen not to follow the work of Spinoza. While there have been some attempts to conceptualise human beings as more unified throughout history, and even staunch dualists have aspects to their beliefs that cannot be explained if the mind is disembodied, the essential idea of a separation of mind and body remains.

The constant drive to categorise, analyse, discriminate, reorganise and predict all phenomena in pursuit of a rational and efficient society is a classic dualist process at work, as it the urge to invent technologies that push Australians into ‘smarter’ and ‘smarter’ ways to think and operate in increasingly virtual modes including computers, the Internet and television. In so doing, human motion has become disconnected from peoples’ lives, particularly in the field of education. The disuse of human motion for ‘active learning’ diminishes the quality and effectiveness of education experiences, weakening learning areas where movement education would normally contribute to more profound educational experiences.

The crux of the vulnerable identity of physical education can be attributed to the conceptualisation of a person as being mind-body separated. Such an attitude has led to the privileging of the mental over the physical in educational programs. Human motion is only included spasmodically, if at all.

Fundamental to such thinking is the idea that bodily experiences do not contribute to the educated core of a person, but can be usefully reassigned to the important issue of assisting students to maintain health and well being. The dominance of the health discourse as described in Chapters 2 & 3 is testament to this limited acknowledgement of the fundamental role of human movement in the overall engagement with learning in students.

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Toward a broader appreciation of human motion in education
To survive, physical education has had to cling to the ‘healthy active lifestyles’ conceptualisation as its main identity. The chameleonic quality of the profession has allowed it to reinvent itself regularly in order to maintain relevance by promoting such issues as fitness, the fight against obesity and participation.

The conceptualisation that people are mind-body separated prevents human motion from getting too close to the core of education as clearly espoused by Wilson of the Curriculum Corporation in Chapter 2, when he suggested that ‘HPE and the Arts should only be studied in a limited way at a few points in schooling...’.(Wilson 2002, p.8). The comment illustrates the ascendancy of the mind over the body in educational curricula, and the significant threat posed to physical education by current philosophical beliefs and societal attitudes and values.

Mind-body dualist ideologies have destructive characteristics that fragment and divide a person’s view of themselves and their ‘world of being’. People use this deeply ingrained belief, usually unwittingly, to compartmentalise aspects of their lives. With regard to their physical selves, people fail to understand that their whole being – body and mind – is constantly involved in the process of reasoning about countless issues every day. Their ignorance of this reality often limits the quality of life’s experiences and reduces the harmonious state of being within the person.

8.1.2 Intellectualisation of the learning area

The philosophical separation of mind and body influences intellectual pursuits. ‘Intellectually trained workers’ act as key persons in the process of change because they are the main agents to develop products such as technologies, policies, programs, and practices that impact on individuals and communities. Examples of these workers are chemists, teachers, engineers, and academics that are trained to apply established and new knowledge and intellectual skills and use them in the employ of others to devote their working activities to ends defined by their employers. These ‘intellectuals’ are found within industrial complexes, institutions and government instrumentalities such as schools and universities.
Their contribution is not materialistic but primarily intellectual in nature. This occurs through the analytic dismemberment and reconstruction of processes in the service of a given task requirement. They do this by using an intellectual technique that is produced directly in the intellectual sphere and applied in a range of areas such as mechanisation, systems, organisation flows and resources. Intellectually trained workers work with abstractions, reasoned detachment, integrity, persistence and a degree of free communication, and are valuable assets in their communities.

However, when the deep ideology and beliefs of the worker or their employer are essentially dualist in nature, aspects of life and human nature may be overlooked to the detriment of individuals and society. The diversion of the Daily Physical Education Program from a whole of being focus to that of ‘fitness and skills’ through the wishes of the developing body in ACHPER and its sponsors, serves as an example of processes developed by intellectually trained workers and encouraged by dualism.

Moreover, when individuals or groups with a belief system embedded in mind-body dualism use intellectual technique to produce resources, policies, and organisational systems, they are often devoid of connections to wider learning, as illustrated by the Fundamental Motor Skills Program developed by Walkley and colleagues in 1996 and the fragmentation of the field of human movement studies as depicted by Aberemethy and colleagues in the same year. The process of division and sub-division by government, corporate and community groups is termed ‘the politics of dualism’ by Fitzclarence (1990). In both situations that have been cited, the action was the result of these politics, which are the result of a misunderstanding of human nature. They highlight the need for broader awareness of the issues raised by this inquiry regarding the nature of a person and the need to ensure that integrated learning experiences are provided to nurture such a person; that is, educating the body must not be regarded as separate from educating the mind in terms of either formal or informal learning.

Toward a broader appreciation of human motion in education
8.2 The embodied mind

New research knowledge of the human being and new interpretations of old theories confirm the idea of the embodied mind. The human body is not, and cannot be, a vessel for a disembodied mind. Flesh, blood, and sinew, hormone, cell and synapse – from top of head to tip of toe, inside and out, from conception until death – are inextricably blended with one another and with their environment to make individual beings the people they are.

Viewed in this way, people who are integrated in overall functioning require integrated opportunities to learn and make the most from their experiences. This realisation has enormous significance for the artificial compartmentalisation of bodies of knowledge across the areas of learning, particularly how they can be connected. In this sense, the current study goes well beyond what is identified as physical education to a wider perspective about the education of the whole of person through movement and activity.

8.2.1 Monism

Opportunities are now emerging where newly refined ideologies, in conjunction with intellectual technique, could lead to the production of curriculum, policy and practice for physical education that could reverse the trend that was signalled by the work of Walkley, Holland, Treloar, & Probyn-Smith (1993), and Abernethy, Kippers, Mackinnon, Neal, & Hanrahan (1996).

Monism is an ancient philosophical belief undergoing a new refinement of definition supported by cognitive and physiological studies. It is opposed to dualism, and monist arguments conceptualise learners as totally mind-body integrated, not dualist in nature. Recent science has, in fact, observed that the developmental processes involved in the internalisation of experience and the subsequent formation of most concepts important to successful functioning in everyday life can be demonstrated to be sensorimotor based, which implies a need for rich bodily experiences in order to develop the full potential of the growing child, young adult or even mature person.
Interestingly, metaphorical thought has been suggested as the main way in which people reason their ‘world of being’ and metaphorical expressions in a variety of forms – verbal, non-verbal and written – expose the inextricable interrelationship of the mind with motion. This revelation has enormous implications across all the learning areas of education, family or community programs.

The current study confirms the interrelationships of human motion with learning and development through memoir narrative analysis involving the examination of written self-defining memories of events in students’ lives. Student recollections expose clearly the acquisition of life skills and concepts that develop and form mental structures through emotional and bodily experiences.

This rebuttal of the cultural ideology of mind-body separation demonstrates the crucial connection between human motion (bodily experiences) and reasoning. With the establishment of the monistic nature of a person, the effect of activity on the process of reasoning can be essayed and the optimal way to nurture an individual’s living and learning can be investigated.

8.2.2 Emotion, reason and morality

The ability to reason has been taken as a defining characteristic of human beings since philosophers began considering the origins of humans and their place in the universe. Aspects of reasoning ability include the capacity to make logical inference, to conduct enquiry, to solve problems, to evaluate, to criticize, to deliberate about how to act, and to reach an understanding of the self, other people, and the world. Therefore, a radical change in the understanding of reason is a radical change in the understanding of what it means to be human.

New insight, therefore, into the embodiment of reason via the sensorimotor system (Lakoff & Johnson 1999) has the potential to profoundly affect the role of human motion in education. Concepts developed in a person are not a reflection of the mind acting in splendid isolation from sensory or motor input, as dualism propounds. The sensorimotor system plays a crucial role in shaping them. In turn, the involvement of the sensorimotor system in the conceptual system keeps the conceptual system very much in touch with the world.
In addition to the effects of the sensorimotor system on reasoning, positive psychologists Peter Salovcy and John Meyer have illuminated the involvement and influence of emotion in the process of reasoning. Moreover, the neuroscientist Damasio has found that during the process of reasoning, all neuronal structures in the body function in an integrated fashion. He has been able to demonstrate from neurobiological research the complete interdependence and interconnection of neural and physiological systems within the body. His work clearly demonstrates integrated functioning within a person, particularly how reasoning and feelings culminate in a sense of wholeness.

In the same area of examination and theory, Lakoff and Johnson (1999) have posited that rich subjective experiences such as desire, affection and achievement are conceptualised, visualised and reasoned from the sensorimotor domains. These experiences are conceptualised using metaphors, which allow conventional mental imagery from sensorimotor domains to be expressed. It is, in fact, difficult to think of common subjective experiences that are not conventionally conceptualised in terms of metaphor.

Lakoff and Johnson’s integrated theory of primary metaphors has enormous ramifications for human motion’s involvement in education. The understanding that a person acquires a very large system of primary metaphors automatically and unconsciously by simply functioning in ordinary ways, moving around everyday from the earliest years is most profound. In fact, individuals have no choice in the matter. Their neural connections are formed during periods of development that involve mostly sensorimotor systems. The result is that the person naturally thinks using countless numbers of primary metaphors.

This study extends Lakoff and Johnson’s theory regarding the structure of primary metaphors as artefacts of embodied thought. Metaphors, as discursive tools, are intrinsically social devices. They are a method of communication and therefore of establishing and maintaining relationships. Embodied thought expressed through metaphor is always a social phenomenon. ‘We are our bodies...’. (Caddick 1986, p.76)

Toward a broader appreciation of human motion in education
The development of new insights about the formation of conceptual metaphors that are sensorimotor based has significance for education. Primary metaphors such as 'Important is Big', and 'Understanding is Grasping' are easily traceable to human motion experiences.

Complex metaphors are built up from primary metaphors. 'A Purposeful Life Is a Journey' in Chapter 4 is an example of an important abstract concept in life that is embodied by pairing subjective with sensorimotor experience, sourcing the domain logic from the inferential structure of the sensorimotor system, and instantiated neurally in synaptic weights associated with neural connections.

Using Lakoff and Johnson's theories in relation to the construction and use of metaphors, the current study examined written memory narratives to confirm and expose sensorimotor involvement in the development of personal systems of behaviour and values and the acquisition of knowledge of self and the environment.

Scrutiny of the memories collected for this study revealed the relationship between human motion and the formation of self and how this relationship gives impetus to the human spirit. Self-knowledge, morality and emotional influences were all identified in the student memories. While much more information could have been gleaned from the evidence, such as power perceptions, gender issues and social interrelationships, the focus remained on the individual and the deep influence of human motion on their being and reasoning. As such, self-knowledge is social knowledge. It comes about as a result of social interaction. Understood in this way, 'lived physical experience' are intrinsically social experiences.

Analysis of the student recollections unveiled how the students conducted enquiries, solved problems, evaluated, critiqued, deliberated about how to act, and gained an understanding of themselves, other people and the local and global environments. The students presented an array of 'lived physical experiences' from which they gained new understandings of themselves, others and the world.

Scrutiny of the memories and consideration of emerging theories about 'humanness' indicate that it is entirely plausible that human reasoning involves inputs from human motion and emotion. The data confirmed, moreover, that monism is a credible interpretation of the state of being of the human organism.
8.3 Broadening the paradigm: The Essential Learnings

In the light of new understandings of "humanness", it is significant that the SACSA Frameworks has introduced the Essential Learnings. The five Learnings lie both within and without the boundaries of the key learning areas, and encourage their development through movement of the integrated learner, one possessed of both knowledge and wisdom.

Ideally a learner educated with the Essential Learnings as the cornerstone of his or her education would leave school with, among other things, a sense of identity and place, a capacity for dealing with future events, a recognition of the interdependence of social and physical environments. Further, they would develop the ability to think reflectively and critically and the ability to communicate and use the tools of communication.

The concept of the Essential Learnings provides those physical educators awake to the implications an opportunity to broaden the paradigm of the physical education learning area since they already possess skills and knowledge related to human movement and physical activity that can be translated into innovative programs of education.

Events such as Eisteddfods and programs such as outdoor education, when conducted with a new appreciation of the development of human reason, already offer models, although incomplete, of what might be achieved in terms of students' personal development. Combined with more cross-curricular content and therefore invested with greater educational scope, activity programs could become increasingly mainstream.

8.4 A final word

The current study contributes to the learning area of physical education by:

- clarifying how the ideologies and practices of mind-body dualism have acted to the detriment of the acknowledgement and use of human motion in education
- interpreting and applying theories from areas seldom used in the field of human movement, including psychology, philosophy, cognitive science, neuroscience and positive psychology
Insights offered by research in these fields provide a substantial body of knowledge and theory about the nature of ‘humanness’, and the need for sensorimotor input to achieve wholeness in terms of intellect, emotion and reason.

- developing a methodological strategy to expose underlying concept formation, metaphorical expression, and essential learning of life skills in students, using narrative analysis of memories of life and learning experiences

- offering arguments for human motion that can be used to assist in providing a greater awareness among educators, parents and community groups of the inherent value of human motion in education

- identifying the location and role of human motion in the core of emerging Australian education frameworks such as the Essential Learnings.

This study is intended, then, to provide new understandings about human motion as a fundamental element in the monist student. The implications for education in this context are many, including the need for awareness of how students function in varying situations, how this relates to the ways in which they learn, and what collaborations between teachers, parents and community bodies will provide for and better nourish students as they face an increasingly complex future.

Human motion is an integral part of daily life and learning, and the depth of its influence on cognitive structures has been illuminated throughout this study. The findings provide the opportunity for considerable and varied research to monitor, observe, evaluate and discover what is happening within the active individual in a variety of settings. The knowledge emerging from this inquiry is applicable across the lifespan of an individual, but specifically targets the school years and young persons – pre-school, primary, secondary and tertiary education. In each of these sectors there are ramifications for the formulation and conduct of education programs that acknowledge and use human motion.

A broader understanding of the significance of movement and the greater use of movement at the core of the educational paradigm suggest that the term physical education is no longer appropriate. Its narrow interpretation as being associated with sport and games or with health sciences subverts efforts to enlighten both the education and wider communities with regards to the elemental place of movement in human cognition. The name movement studies might, therefore, offer the chance to introduce new ideas and emphases.

Toward a broader appreciation of human motion in education
Physical education has a long history in schooling; and there have always been educators who have understood instinctively its importance to the developing self. For various historical reasons, including fragmentation and the privileging of other learning areas due to the influences of dualism, physical education has been marginalised by the health sciences.

It is to be hoped that discussion of the ideas offered in this study and further research in the area of cognitive development will alter perceptions that have been founded on dualism and maintained by habit. It is time to take a different view of physical education. The results of this study have demonstrated that movement is one of the cornerstones of the self and of intellect, and, as such, should be at the centre of the educational paradigm.

*If we always see how we’ve always seen, we’ll always be who we’ve always been!*
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Appendices
MEMORANDUM

TO: Mr Graham Dodd
     Social & Cultural Studies in Ed
     Geelong

FROM: Secretary, Deakin University Human Research Ethics Committee (DUHREC)

DATE: 13 December 2001

SUBJECT: PROJECT: EC 252-2001 (Please quote this project number in future communication.)

THE ANALYSIS OF WRITTEN MEMORIES FROM INDIVIDUALS ABOUT PHYSICAL LIFE EXPERIENCES THAT INVESTIGATES THE LINK BETWEEN MOVEMENT, EMOTION AND REASONING, TO ASSIST A STUDY TO RE-CONCEPTUALISE

This application was considered at the DU-HREC meeting held on 10 December 2001.

APPROVAL HAS BEEN GIVEN FOR GRAHAM DODD, UNDER THE SUPERVISION OF DR LINDSAY FITZCLARENCE, TO UNDERTAKE THIS PROJECT FROM 13 DECEMBER 2001 TO 31 JULY 2002.

The approval given by the Deakin University Human Research Ethics Committee is given only for the project and for the period as stated in the application and approval. It is your responsibility to contact the Secretary immediately should any of the following occur:
- Serious or unexpected adverse effects on the participants
- Any proposed changes in the protocol, including extensions of time.
- Any events which might affect the continuing ethical acceptability of the project.
- The project is discontinued before the expected date of completion.

In addition you will be required to report on the progress of your project at least once every year and at the conclusion of the project. Failure to report as required will result in suspension of your approval to proceed with the project.

Victoria Emery
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Matschoots.Rachel@sa.gov.sa.gov.au

DETE 04/53/01.f

27 November 2001

Dear Principal/Director/Site Manager

The research project entitled 'The analysis of written memories from individuals about physical life experiences that investigates the link between movement, emotion and reasoning to assist a study to re-conceptualise physical education' being conducted by Graham Dodd from the University of South Australia has been reviewed centrally and approval granted for access to DETE sites. However the researcher will still need to obtain your agreement to proceed with this research at your particular site.

Once approval has been given at the local level, it is important to ensure that the researcher fulfils their responsibilities in obtaining informed consent as agreed, that individuals' confidentiality is preserved, and that safety precautions are in place.

Researchers are encouraged to provide feedback to sites they use in their research, and you may want to make this one of the conditions for accessing your site. To ensure maximum benefits to DETE, researchers are also asked to supply the department with a copy of their final report, which will be circulated to interested staff and then made available to DETE educators for future reference.

If you have any queries regarding research issues, please feel free to contact the Research Facilitator on telephone (08) 8226 2472 for further information.

Sandra Lloyd
EXECUTIVE DIRECTOR STRATEGIC PLANNING AND INFORMATION
A WRITTEN MEMORY ABOUT AN EXPERIENCE IN YOUR LIFE

A narrative written for a physical education study conducted by Graham Dodd as a PhD scholar at the School of Social and Cultural Studies in Education, Deakin University, Geelong Campus

October 2002
The Remembered Self: Self-defining Memories

A self-defining memory is a personal memory that has the following attributes:

1. It is at least one year old.

2. It is a memory of a specific event in your life that you remember very clearly and that still feels important to you even as you think about it now.

3. It is a memory that helps you to understand who you are as an individual and might be the memory you would tell someone else if you wanted that person to understand you in a more profound way.

4. It may be a memory that is positive or negative, or both, in how it makes you feel. The only important aspect is that it leads to strong feelings.

5. It is a memory that you have thought about many times. It should be familiar to you like a picture you have studied or a song (happy or sad) you have learned by heart.

To understand best what a self defining memory is, imagine you have just met someone you like very much and are going for a long walk together. Each of you is very committed to helping the other get to know the “real you”. In the course of the conversation, you describe a memory that you feel conveys powerfully how you have come to be the person you currently are and how you have come to understand some aspect of the world. It is precisely these memories that constitute self-defining memories.

Task

On the sheets of paper that follow, please jot down a caption or one-sentence summary of a self-defining memory that comes to mind when you were involved in some form of physical pursuit and experienced a defining moment when you gained a new insight and were able to understood something about yourself, others or the environment with great clarity. Describe the memory with enough detail to help your imagined friend to see and feel as you did. Although this memory is anonymous and will only be identified by code name, please do not reveal a memory that makes you feel uncomfortable when describing it.
Your Self-defining Memory

Gender ______ Current Age ______ Ethnicity ___________________________

Memory Caption (a brief sentence to identify the event):

____________________________________________________________________

____________________________________________________________________

My age at the time of the original event: _________________________________

Other person/persons involved in the event: ________________________________

Description of the event: where you were, whom you were with, what happened, how you and others reacted, what has happened since. Include details that will help an imagined friend see and feel as you did. With about how many different people have you shared your memory? Please do not write about a memory that makes you feel uncomfortable.

Write as much as you like on the following pages. ...
Information letter to Principals

Appendix 4

A Physical Education Study

Dear

I am enrolled in a Doctorate of Philosophy at the School of Social and Cultural Studies in Education, Geelong Campus of Deakin University. My Supervisor is Dr Lindsay Fitzclarence.

The research and thesis I am undertaking is entitled:

'Persons: A study in support of monism with implications for a new appreciation of physical education'.

This is a study about the currently held conceptualisation of persons and the learning experiences from contemporary physical education programs. It aims to invigorate appreciation of the subject and improve the arguments for more being taught in schools. A review of the literature including reports over the last 20 years indicates two issues need to be reviewed and challenged.

One is the view we have of ourselves as people – whether we are mind-body separated or mind and body as one integrated being. The other is how important physically moving is to the development of a person as they gain self-knowledge and understandings of others and their ‘world of being’.

The method chosen for this research is to gather written memories from primary and secondary school students about significant physical life experiences. An analysis of these 'self-defining memories' provides an insight into how the students came to understand an aspect of themselves, people around them and their environment. The memories indicate the impact of significant life events that generate a prevailing influence over time to shape and develop individuals. They assist in explaining how they have become who they are. The memories of these events include aspects such as who they were with, where they were, what they were feeling, what were they doing and what was the self-knowledge or understanding that became much clearer for them?

The Deakin University Ethics Committee and the Department of Education, Training and Employment have approved this research. I am asking permission for your students to take part in this research.

As a participant they will be provided with guidelines to follow as they write their memory on sheets of paper prepared for the task. The guidelines would be discussed with them and a time negotiated when the written memory needs to be completed for collection.

The memory they write is confidential and will be locked away in my office in the School of Physical Education, Exercise and Sport Studies at the Underdale Campus of the University of South Australia. Any professional journal articles will be written in a general way with no individuals identified.
Their participation in this research is entirely voluntary. They are free to withdraw at any time during the study in which event participation in the research study will immediately cease and any information obtained will not be used.

If you have any further questions regarding the study, please contact me on (08) 8302 6559 or E-mail to graham.dodd@unisa.edu.au, or my Supervisor, Dr Lindsay Fitzclarece on (03) 5134 1854 or E-mail to Lindsay.Fitzclarece@monash.edu.au.

I look forward to your students’ involvement in this important study.

Yours sincerely,

Graham Dodd
PhD Scholar
School of Physical Education, Exercise and Sport Studies
Underdale Campus
UniSA
CONSENT FORM – Year 7 Students

MEMORY NARRATIVE TEXTS

I, ......................................................................................................................... Principal of ..............................................................
............................................................................................................................School

hereby give permission for the following Year 7 students

............................................................................................................................

............................................................................................................................

to be involved in a research study being undertaken by Mr Graham Dodd as a PhD scholar in the School of
Social and Cultural Studies in Education at Deakin University, Geelong Campus.

I have had it explained to me, and fully understand that the purpose of the research is to investigate a memory
from five individual male, and five individual female students relating to a physical experience that was a
defining moment for them. The event was a time when they came to understand something more clearly about
themselves, others or their ‘world of being’.

I understand that they will be asked to write about this event as part of a methodology (The Remembered
Self: Self-defining Memories) that analyses their memories to interpret and understand what happened to
enable them to reach this higher level of understanding. The analysis enables a greater insight into how they
have become who they are and what motivates them in life. I freely offer my permission for these students to
write as much as they wish to convey this memory on the sheets provided on the understanding that
permission is also given by each students parent/guardian.

The involvement for this School is minimal with no disruption to classes. Students will be identified in close
liaison with the class/home group teachers and a small meeting held with the five male and female
participants to clarify the task.

I acknowledge

1. That the aims, methods, and anticipated benefits, and possible risks of the research study, have been
explained to me.

2. That I voluntarily and freely give my consent for the Year 7 students of this School to participate in
the above research study.

5. That I am free to withdraw my consent at any time during the study, in which event participation in the
research study will immediately cease and any information obtained from the Year 7 students of this
School will not be used if I so request.

3. I understand that aggregated results will be used for research purposes and may be reported in
scientific and academic journals.
I agree that

4. The School MAY / MAY NOT be named in research publications or other publicity without prior agreement.

5. I DO / DO NOT require an opportunity to check the factual accuracy of the research findings related to the School.

6. I EXPECT / DO NOT EXPECT to receive a copy of the research findings or publications.

Signature:  Date:
Dear

I am enrolled in a Doctorate of Philosophy at the School of Social and Cultural Studies in Education, Geelong Campus of Deakin University. My Supervisor is Dr Lindsay Fitzclarenc.

The research and thesis I am undertaking is entitled:

‘Persons: A study in support of monism with implications for a new appreciation of physical education’.

This is a study about the currently held conceptualisation of persons and the learning experiences from contemporary physical education programs. It aims to invigorate appreciation of the subject and improve the arguments for more being taught in schools. A review of the literature including reports over the last 20 years indicates two issues need to be reviewed and challenged.

One is the view we have of ourselves as people – whether we are mind-body separated or mind and body as one integrated being. The other is how important physically moving is to the development of a person as they gain self-knowledge and understandings of others and their ‘world of being’.

The method chosen for this research is to gather written memories from primary and secondary school students about significant physical life experiences. An analysis of these ‘self-defining memories’ provides an insight into how the students came to understand an aspect of themselves, people around them and their environment. The memories indicate the impact of significant life events that generate a prevailing influence over time to shape and develop individuals. They assist in explaining how they have become who they are. The memories of these events include aspects such as who they were with, where they were, what they were feeling, what were they doing and what was the self-knowledge or understanding that became much clearer for them?

The Deakin University Ethics Committee and the Department of Education, Training and Employment have approved this research. I am asking permission for your son/daughter to take part in this research.

As a participant they will be provided with guidelines to follow as they write their memory on sheets of paper prepared for the task. The guidelines would be discussed with them and a time negotiated when the written memory needs to be completed for collection.

The memory they write is confidential and will be locked away in my office in the School of Physical Education, Exercise and Sport Studies at the Underdale Campus of the University of South Australia. Any professional journal articles will be written in a general way with no individuals identified.

Their participation in this research is entirely voluntary. They are free to withdraw at any time during the study in which event their participation in the research study will immediately cease and any information obtained from them will not be used.

If you have any further questions regarding the study, please contact me on (08) 8302 6559 or E-mail to graham.doddy@unisa.edu.au, or my Supervisor, Dr Lindsay Fitzclarenc on (03) 5134 1854 or E-mail to Lindsay.Fitzclarenc@monash.edu.au.
I look forward to their involvement in this important study.

Yours sincerely,

Graham Dodd  
PhD Scholar  
School of Physical Education, Exercise and Sport Studies  
Underdale Campus  
UniSA
CONSENT ON BEHALF OF A MINOR OR DEPENDENT PERSON

MEMORY NARRATIVE TEXTS

I, of

Hereby give consent for my son/daughter to be a subject of a human research study to be undertaken by Mr Graham Dodd as a PhD scholar in the School of Social and Cultural Studies in Education at Deakin University, Geelong Campus.

I have had it fully explained to me, and fully understand that the purpose of the research is to investigate a memory of my son/daughter relating to a physical experience that was a defining moment for them. The event was a time when he/she came to understand something more clearly about themselves, others or their ‘world of being’.

I understand that they have been asked to write about this event as part of a methodology (The Remembered Self: Self-defining Memories) that analyses their memory to interpret and understand what happened to enable them to reach this higher level of understanding. The analysis enables a greater insight into how they have become who they are and what motivates them in life. I freely offer my permission for my son/daughter to write as much as they wish to convey this memory on the sheets provided.

I acknowledge

1. That the aims, methods, and anticipated benefits, and possible risks of the research study have been explained to me.

2. That I voluntarily and freely give my consent to my child’s/dependent’s participation in such research study.

3. I understand that aggregated results will be used for research purposes and may be reported in scientific and academic journals.

4. Individual results will not be released to any person including medical practitioners.

5. That I am free to withdraw my consent at any time, during the study in which event my son/daughter’s participation in the research study will immediately cease and any information obtained will not be used.

Signature: Date:

NOTE: The parent or parents, or person(s) having guardianship of the child must sign the consent form.
CONSENT FORM – Year 7 Students
MEMORY NARRATIVE TEXTS

1. ....................................................................................... Teacher at ................................................
   ....................................................................................... School

hereby give permission for the following Year 7 students

..............................................................................................

..............................................................................................

to be involved in a research study being undertaken by Mr Graham Dodd as a PhD scholar in the School of Social and Cultural Studies in Education at Deakin University, Geelong Campus.

I have had it explained to me, and fully understand that the purpose of the research is to investigate a memory from five individual male, and five individual female students relating to a physical experience that was a defining moment for them. The event was a time when they came to understand something more clearly about themselves, others or their ‘world of being’.

I understand that they will be asked to write about this event as part of a methodology (The Remembered Self: Self-defining Memories) that analyses their memories to interpret and understand what happened to enable them to reach this higher level of understanding. The analysis enables a greater insight into how they have become who they are and what motivates them in life. I freely offer my permission for these students to write as much as they wish to convey this memory on the sheets provided on the understanding that permission is also given by each students parent/guardian.

I acknowledge

1. That the aims, methods, and anticipated benefits, and possible risks of the research study, have been explained to me.

2. That I voluntarily and freely give my consent for the Year 7 students in my class to participate in the above research study.

5. That I am free to withdraw my consent at any time during the study, in which event participation in the research study will immediately cease and any information obtained from the Year 7 students in my class will not be used if I so request.

3. I understand that aggregated results will be used for research purposes and may be reported in scientific and academic journals.
I agree that

4. *I DO / DO NOT require an opportunity to check the factual accuracy of the research findings related to the School.*

5. *I EXPECT / DO NOT EXPECT to receive a copy of the research findings or publications.*

Signature:  
Date: