

Measuring Student Well-Being in the Context of Australian Schooling: Discussion Paper

Commissioned by the South Australian Department of
Education and Children's Services as an agent of the Ministerial
Council on Education, Employment, Training and Youth Affairs
(MCEETYA).

Julian Fraillon
The Australian Council *for* Educational Research
December 2004



MINISTERIAL COUNCIL ON EDUCATION,
EMPLOYMENT, TRAINING AND YOUTH AFFAIRS

ACER

© 2005 Curriculum Corporation as the legal entity for the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA).

Curriculum Corporation as the legal entity for the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) owns the copyright in this publication. This publication or any part of it may be used freely only for non-profit education purposes provided the source is clearly acknowledged. The publication may not be sold or used for any other commercial purpose.

Other than as permitted above or by the Copyright Act 1968 (Commonwealth), no part of this publication may be reproduced, stored, published, performed, communicated or adapted, regardless of the form or means (electronic, photocopying or otherwise), without the prior written permission of the copyright owner. Address inquiries regarding copyright to:

MCEETYA Secretariat, PO Box 202, Carlton South, VIC 3053, Australia.

This paper has been prepared with funding provided from the MCEETYA National Fund for Educational Research.

The views expressed in this paper are those of the authors and are not necessarily those of the Ministerial Council on Education, Employment, Training and Youth Affairs or individual State/Territory or Australian Government Education Ministers or Departments responsible for Education.

Contents

1	Executive Summary	4
1.1	Introduction	4
1.2	Defining Student Well-Being	4
	Recommendations	5
1.3	Describing the Dimensions of Student Well-being	5
	Recommendations	6
1.3.1	Defining the Aspects of Student Well-being	7
1.3.1a	The intrapersonal dimension	7
1.3.1b	The interpersonal dimension	7
	Recommendations	8
1.4	Measuring student well-being	9
1.4.1	The measurement instrument	9
1.4.2	Use of the measurement instrument	9
	Recommendations	9
1.5	Moving Forward: Recommendations for Phase 2	10
	Recommendations	10
2	Introduction	11
3	Defining Student Well-being	15
3.1	Conceptualising a Model of Student Well-Being	15
3.1.1	Introduction	15
3.1.2	Defining the school community as the context for student well-being	16
3.1.3	A model of student well-being	17
3.2	Establishing an Overarching Definition of Student Well-being	18
3.2.1	Introduction	18
3.2.2	Evaluating the contribution of common elements of definitions of well-being to an overarching definition of student well-being in the school community	19
3.3	Recommendations	23
4.	Describing the Dimensions of Student Well-being	24
4.1	Introduction	24
4.2	Defining the Dimensions of Student Well-being	26
4.3	Recommendations	29
4.4	Defining the Aspects of the Intrapersonal Dimension of Student Well-being	30
4.5	Defining the Aspects of the Interpersonal Dimension of Student Well-being	34
4.6	Recommendations	36
5.	Measuring Student Well-Being	37
5.1	Introduction	37
5.2	A Proposed Methodology for Measuring Student Well-Being	38
5.2.1	Component 1: the measurement instrument	38
5.2.2	Component 2: use of the measurement instrument	41
5.3	Recommendations	43
6.	Moving Forward: Recommendations for Phase 2	44
6.1	Introduction	44
6.2	Constructing a Measurement Instrument	44
6.2.1	Developing three linked measurement instruments	44
6.2.2	Optional development of additional measurement instruments	44

6.3	Trial testing the assessment instruments	44
6.3.1	Review and refinement of the survey implementation process	45
6.3.2	Validation of the substantive properties of the assessment items	45
6.3.3	Validation of the measurement model of well-being	45
6.4	Constructing and reporting against a well-being framework	46
6.4.1	Construction of an empirically based described scale of student well-being	46
6.4.2	Reporting and monitoring student well-being	46
6.5	Using measurement data to support student well-being	46
6.6	Recommendations	47
	References	48

1 Executive Summary

1.1 Introduction

This report has been commissioned by the South Australian Department of Education and Children's Services as an agent of the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA). The report constitutes Phase 1 of a planned two phase process. Specifically this report:

- defines a measurement construct for student well-being;
- outlines a methodology for measuring student well-being; and
- provides recommendations for ongoing work in the measuring, reporting and monitoring of student well-being (Phase 2).

(pp. 11-14)

1.2 Defining Student Well-Being

- Well-being has been a pervasive and extensively researched construct in psychology and education for over forty years. This has given rise to a great diversity of definitions and models of well-being. Broadly, well-being has been defined from two perspectives. The clinical perspective defines well-being as the absence of negative conditions and the psychological perspective defines well-being as the prevalence of positive attributes. This report adopts the psychological perspective.

(pp. 15 & 18)

- Student well-being cannot be viewed in isolation from a broader school context. School communities provide both the defining context and have the potential to significantly influence well-being. School communities have often been defined in terms of belonging, participation and influence, values and commonality. Each of these defines membership of a school community in terms of an individual's beliefs about their own membership. They therefore necessitate the use of some form of psychological measure to determine membership of a school community. Alternatively, school community can be defined in terms of function. This enables membership of a school community to be defined objectively by an individual's functional connection to a school. This report adopts a functional definition of school community.

(pp. 15-16)

- Models of well-being typically include an overarching definition articulated by a set of dimensions. They also typically: describe adult, or life-span well-being, consider holistic rather than context specific well-being and provide a theoretical rather than a measurement framework of well-being. This report describes a specific measurement model of student well-being in the school community. The measurement model includes an overarching definition of well-being that is articulated by dimensions.

(p. 16)

1. Executive Summary

- Few explicit definitions of well-being exist relative to the prevalence of the term well-being in academic literature. Positive psychological definitions of well-being generally include some of six general characteristics. The six characteristics of well-being most prevalent in definitions of well-being are:
- the active pursuit of well-being;
 - a balance of attributes;
 - positive affect or life satisfaction;
 - prosocial behaviour;
 - multiple dimensions; and
 - personal optimisation.

The potential for each of these six characteristics to contribute to an overarching definition for a measurement construct of student well-being in the school community is considered. The first four characteristics listed above make no useful contribution to an *overarching definition* of student well-being. Personal optimisation, the final characteristic listed above, although pervasive in definitions of well-being does not contribute usefully to a measurement construct of student well-being. This is because there is no way of ascertaining the level of any given individual's optimal functioning. This report advocates using the notion of *effective function* rather than personal optimisation as the basis for an overarching definition of student well-being. This report also advocates a multi-dimensional model of student well-being.

(p. 17-22)

Recommendations

- I. An operational measurement model of student well-being will refer to student well-being in the school community where the school community is defined as: *the cohesive group with a shared purpose that is centred around a school.*
- II. An operational measurement model of student well-being will consist of an overarching definition of student well-being that is manifest in a set of interrelated but discrete dimensions.
- III. The overarching definition of student well-being for the operational measurement model is that student well-being is: *the degree to which a student is functioning effectively in the school community.*

(p. 23)

1.3 Describing the Dimensions of Student Well-being

- In keeping with the diversity of definitions of well-being in the research literature, there exists a diversity of multi-dimensional models of well-being. Models of well-being vary in substantive focus and organisational structure. There is little consensus regarding the nature and number of the dimensions across the models. In this report the dimensions of well-being are derived from analysis and review of existing well-being research.

(p. 24)

1. Executive Summary

- The dimensions of a measurement model of student well-being should adequately describe the breadth of the well-being construct, and yet remain sufficiently discrete to warrant individual descriptions. The dimensions form broad substantive categories that are comprised of sub-dimensions (aspects). The aspects serve two primary practical purposes. Firstly, they provide the substance of a dimension that can form the core of an articulated well-being scale. Secondly, they provide the substantive foundations for the development of assessment items to measure well-being. In this report the dimensions of the measurement model of well-being consist of aspects. The aspects define the substance of the dimensions and are the bases for the assessment items designed to collect evidence of student wellbeing.

(p. 25)

- There are five substantive dimensions that are consistently represented in the well-being literature:
 1. Physical
 2. Economic
 3. Psychological
 4. Cognitive
 5. Social.

Each of these five dimensions is evaluated with respect to its value in contributing to the measurement construct of student well-being as effective function in the school community. The physical and economic dimensions are better considered as *influencing* student well-being than as fundamental to the *measurement* of well-being. The physical dimension of well-being should however be regarded as a construct worthy of independent reckoning. The non-academic components of the cognitive dimension are subsumed by the broader psychological (intrapersonal) well-being dimension. The intrapersonal and social (interpersonal) dimensions are sufficient for the measurement model of student well-being. This report defines the measurement model of student well-being as comprising two dimensions: intrapersonal and interpersonal.

(pp. 26 to 29)

Recommendations

- IV. The operational measurement model of student well-being in the school community should have two dimensions. These are an interpersonal and an intrapersonal dimension.
- V. Each of the two dimensions of student well-being should be defined in terms of a set of aspects. These aspects should form the basis for the development of the measurement items through which evidence of student well-being can be collected.

1.3 Defining the Aspects of Student Well-being

1.3.1a The intrapersonal dimension

- The intrapersonal dimension of student well-being includes those aspects of well-being primarily manifest in a student's internalised sense of self and capacity to function in their school community. This report defines nine distinct aspects of the intrapersonal dimension of student well-being.

(pp. 30)

- The nine distinct aspects of the intrapersonal dimension of student well-being are:
 - *Autonomy*: A person is autonomous when their behaviour is experienced as willingly enacted and when they fully endorse the actions in which they are engaged and/or the values expressed by them.
 - *Emotional regulation*: In the school context, emotional regulation is manifest by the degree to which a student's emotional responses are of an appropriate type and magnitude to the events that surround them.
 - *Resilience*: Resilience is the capacity to manage, recover and move on from critical challenging events that tax or exceed a person's resources.
 - *Self-efficacy*: Self-efficacy refers to the degree to which a person believes themselves able to organise, execute and adapt strategies to meet desired outcomes.
 - *Self-esteem*: Self esteem describes the affective component of self concept; it refers to the way people feel about themselves.
 - *Spirituality*: Spirituality is defined as a positive sense of meaning and purpose in life.
 - *Curiosity*: Curiosity is the intrinsic desire to learn more.
 - *Engagement*: Student engagement includes both engagement with the learning process and engagement with the school community.
 - *Mastery Orientation*: Mastery orientation is defined as the desire to complete tasks to the best of one's ability.

(pp. 31-34)

1.3.1b The interpersonal dimension

- The interpersonal dimension of student well-being includes those aspects of well-being primarily manifest in a student's appraisal of their social circumstances and consequent capacity to function in their school community. This report defines four distinct aspects of the interpersonal dimension of student well-being.

(p. 34)

1. Executive Summary

- The four distinct aspects of the interpersonal dimension of student well-being are:
- *Communicative efficacy*: Communicative efficacy is the use of communicative skills in context to achieve a purpose.
 - *Empathy*: Empathy includes two constructs: *cognitive* empathy is intellectually taking the role or perspective of another person; *affective* empathy is responding with the same emotion to another person's emotion.
 - *Acceptance*: Acceptance is the construal of society through the character and qualities of other people. Acceptance is founded in beliefs about the fundamental goodness of others and includes respect, tolerance, trust and understanding.
 - *Connectedness*: Interpersonal connectedness is the subjective awareness of being in close relationship with the social world. It represents a meaningful linkage with a wide range of people.
- (pp. 34-35)

Recommendations

- VI. The intrapersonal dimension of the operational measurement model of student well-being should be defined as: a student's internalised sense of self and consequent capacity to function in their school community.
- VII. The intrapersonal dimension of the operational measurement model of student well-being should be comprised of nine aspects:
- autonomy
 - emotional regulation
 - resilience
 - self-efficacy
 - self esteem
 - spirituality
 - curiosity
 - engagement
 - mastery orientation.
- VIII. The interpersonal dimension of the operational measurement model of student well-being should be defined as: a student's appraisal of their social circumstances and consequent capacity to function in their school community.
- IX. The interpersonal dimension of the operational measurement model of student well-being should be comprised of four aspects:
- communicative efficacy
 - empathy
 - acceptance
 - connectedness.

(p. 36)

1.4 Measuring student well-being

1.4.1 The measurement instrument

- The measurement instrument in this report comprises a set of items that address different aspects of the two dimensions of student well-being. Each item includes a set of behaviours that describe responses to everyday school situations, or responses to hypothetical situations. Each behaviour represents a different level of well-being. For each item, respondents are required to select the behaviour, or likely behaviour, that best represents the individual student being assessed.

(pp. 38-41)

1.4.2 Use of the measurement instrument

- The benefits and limitations are considered of collecting evidence of student well-being using student self-reports in response to the measurement instrument. This report does not recommend the administration of the measurement instrument using student self-reports.

(pp. 41-43)

- The benefits and limitations are considered of collecting evidence of student well-being using teacher judgements in response to the measurement instrument. This report recommends the administration of the measurement instrument using a number of teachers' judgements of each student.

Recommendations

- X. The measurement instrument should consist of two types of assessment items. The assessment items should be either a school based scenario followed by hypothetical student responses, or of a set of generalisable student behaviours independent of context. Each item should be predominately representative of a single aspect of student well-being as defined by this report. The different responses to each item should implicitly indicate different levels of the relevant aspect and explicitly indicate different levels of effective function in the school community.
- XI. The measurement instrument should be administered as teacher surveys using a number of teachers' judgements of each student.

(p. 43)

1.5 Moving Forward: Recommendations for Phase 2

Recommendations

- XII. A minimum of three measurement instruments of student well-being should be developed. One instrument should be developed for use in the junior primary years (Years P-4), one for the middle years (Years 5-8) and one for the senior years (Years 9-12).
- XIII. The different measurement instruments specific to the different levels of schooling should contain scenarios and behaviours that are congruent with students of that level. The different measurement instruments should also be linked through the use of common assessment items that are applicable to adjacent levels.
- XIV. Consideration should be given to the construction of additional measurement instruments linked by common assessment items to the core instruments. Such instruments could, for example, be designed for use with pre-school and Indigenous Australian students.
- XV. The measurement instruments should be trial tested in a sample of schools. The information from the trial testing should then be used to:
- i. review and refine the survey implementation process;
 - ii. validate the substantive and measurement properties of the assessment items;
 - iii. validate the measurement model of student well-being.
- XVI. The refined measurement instruments can then be used to collect student well-being data from a large representative sample of schools. These data should then be used to construct a described hierarchical scale of student well-being against which student well-being can be measured, reported and monitored.

(pp. 44-47)

2 Introduction

The future child well-being research agenda can be built upon what has been learned. A logical next step is to develop a core set of positive indicators of child well-being in each domain in conjunction with a set of instruments that measure them. Such work would yield important contributions to the conceptualisation and measurement of child well-being and, ultimately, improve the well-being of children. (Pollard & Lee, 2003)

This report has been commissioned by the South Australian Department of Education and Children's Services as an agent of the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA). The report constitutes Phase 1 of a planned two phase process.

The primary purpose of this report is the development of recommendations for the construction of a measurement instrument of student well-being that is focused on those elements of well-being that are susceptible to school intervention. In determining the dimensions and nature of a measurement of student well-being, this report aims to:

- clarify the links in existing national and international research between student well-being, engagement and learning outcomes for primary and secondary school age students;
- identify a set of common and agreed indicators of student well-being;
- identify a range of measures of student well-being and engagement that could be used to inform and improve student well-being at system, site and classroom levels; and
- confirm the links and strength of the relationships between student well-being, engagement, school environment and pedagogy.

In satisfying the aims listed above, the report:

- highlights national and international research in well-being and the impact on student engagement and success;
- identifies elements which are standard and common to student well-being; and
- refers to existing indicators and measures of student well-being.

The relationship between student well-being and the other vital outcomes of schooling is unequivocal. Improved outcomes in all aspects of student well-being are positively associated with improved outcomes in all other aspects of schooling. This educational imperative only serves to strengthen and support the moral imperative for schools and schooling to be inclusive, supportive, and nurturing in order to maintain and support student well-being (Ainley & Ainley, 1999; Battistich, Solomon, & Watson, 1997; L. Beckett, 2000; McGaw, 1992).

The value of aspects of student well-being in the Australian context is also unequivocal. The goals of the Adelaide Declaration on the National Goals for

2. Introduction

Schooling in the Twenty-first Century (MCEETYA, 1999) include explicit reference to positive outcomes that exist in the well-being domain. Examples of this include the goals that students should:

- have qualities of self-confidence, optimism, high self-esteem, and a commitment to personal excellence as a basis for their potential life roles as family, community and workforce members;
- have the capacity to exercise judgement and responsibility in matters of morality ethics and social justice; and
- have the capacity for, and skills in, analysis and problem solving and the ability to communicate ideas and information, to plan and organised activities and to collaborate with others.

These and the broader aspects of student well-being are explicitly addressed and managed using broadly similar strategies across the Australian States and Territories.

In all States and Territories, extensive student support services exist to support student well-being. These services provide professional and para-professional support to students, teachers and parents in the form of personnel, resources, projects and programs. In South Australia and Victoria, for example, the term well-being is used to define organisational divisions of the support service organisations. It is indicative of the complexity and lack of consensus regarding definitions of well-being (Lent, 2004; Pollard & Lee, 2003) that the operational organisational definitions of the term differ between these two and arguably within the organisations themselves.

The values and essence of student well-being are also extensively represented State and Territory curriculum and standards documents. Published in the early 1990s, these documents generally included pervasive value statements (principles) relating to aspects of the well-being domain adjunct to, and with some incorporation into, the substance of curriculum and standards outcomes. The generalisable cross-curricular outcomes of learning relating to student well-being have been given new prominence through more recent curriculum and standards initiatives. For example, the Essential Learnings in South Australia, Tasmania, the Northern Territory and Victoria and the Queensland New Basics documents make explicit learning outcomes relating to aspects of well-being such as communication, social responsibility, personal identity and collaboration.

The introduction to this report begins with a quotation from Pollard and Lee (2003) stating that the time has come in the development of the well-being construct for it to be unified, properly articulated, operationalised and measured. This is equally necessitated by the current direction of Australian education, as outlined in the Adelaide Declaration (1999) and supported through changes in State and Territory systemic approaches to student well-being. In order to better understand, support and improve student well-being in schools, the development of effective ways of measuring and describing it is essential.

In considering the primary purpose of this report, it is useful to confirm its place in the process of assessing and reporting student well-being in schools. Broadly this process can be described as one of development (Phases 1 and 2) and implementation. The implementation phase indicated in the diagram represents the ongoing cycle of use of a developed instrument.

This report primarily details Phase 1 only. Phase 1 includes two main stages:

1. defining a measurement construct for student well-being; and
2. designing an instrument to measure student well-being in schools.

This report also includes recommendations on how best to proceed to Phase 2 of the process. Phase 2 is the construction and refinement of a measurement instrument of student well-being with a view to its ongoing use in schools.

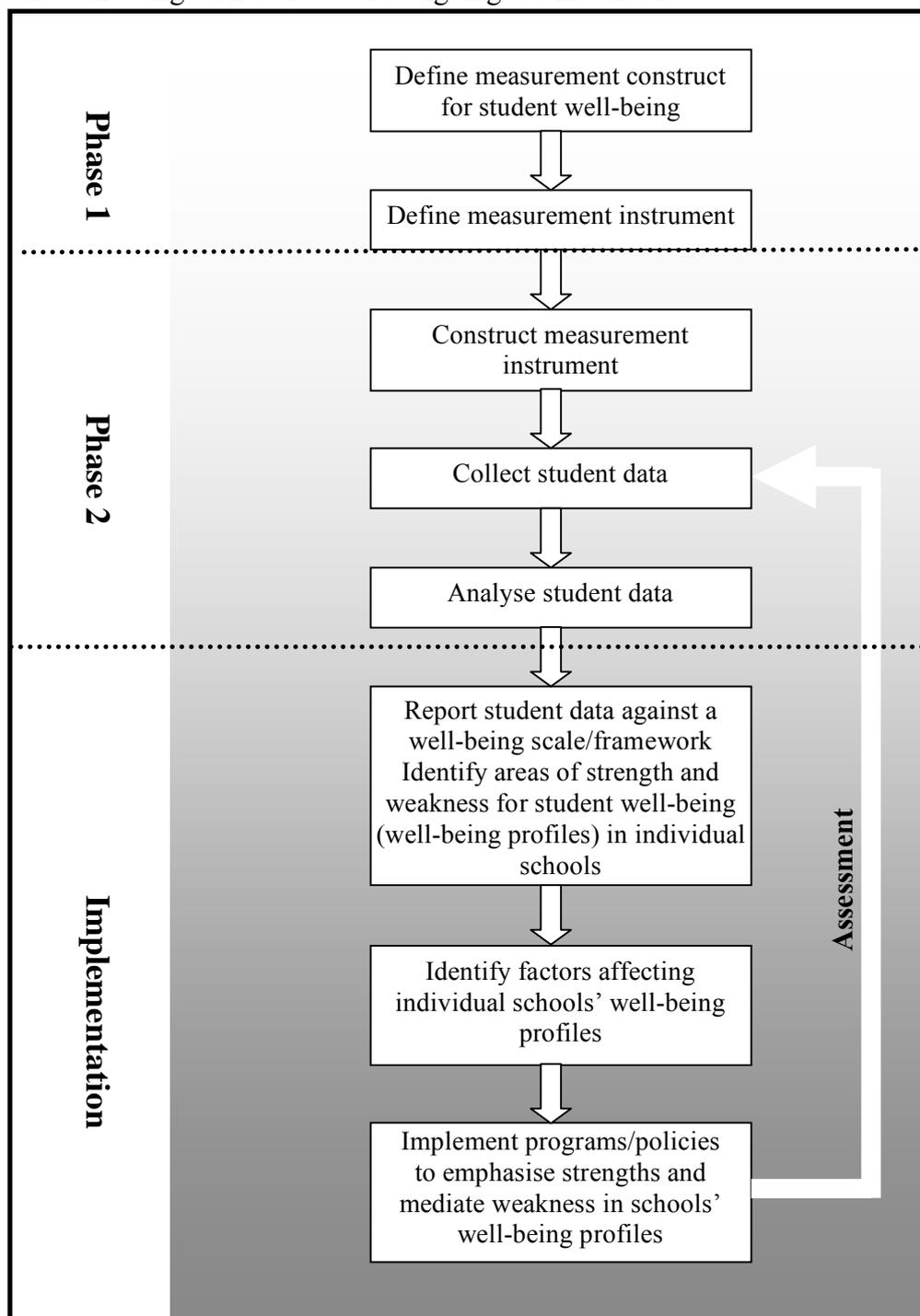


Figure 1: Diagrammatic representation of the place of this study (Phase 1) in the process of assessing and reporting student well-being.

Defining a measurement construct for student well-being

The process of defining a measurement construct for student well-being primarily involves the assimilation and synthesis of the disparate research perspectives of student well-being into a set of commonly represented, or shared, aspects. It is necessarily based on the findings of national and international research into student well-being.

Measurement constructs aim to describe the meaning of a theoretical construct in such a way that its meaning can be measured. The process of defining a measurement construct for student well-being differs significantly from that of determining, describing or evaluating the factors that affect student well-being. In order to define a measurement construct of student well-being, the factors that influence it are relevant in what they tell us about how well-being is conceptualised by researchers and practitioners. These influencing factors may or may not also contribute to the substantive measurement of the underlying well-being construct.

For example, student well-being can be influenced by the relations students have with their primary caregivers. If the relationship with a primary caregiver is regarded as a *measure* of student well-being then students with poor relationships with their primary caregivers would be *measured* as having lower well-being. If the relationship with the primary caregiver is considered to be an *influence but not a measure* of student well-being, then student well-being is measured using other indicators such as, for example, self-esteem. In this case, students with low self-esteem would be *measured* as having low well-being which may then be improved by improving their relationships with their primary caregivers.

Distinguishing between *influences on* well-being and *measures of* well-being is fundamental to the processes of defining and articulating a measurement model for student well-being in Chapters 3 and 4.

Designing an instrument to measure student well-being in schools

The measurement instrument of student well-being is used to collect evidence of student well-being as defined by the measurement construct. The conceptual design of the measurement instrument of student well-being uses measurement theory and practice to operationalise measurement construct. This process draws on national and international understandings of measurement practice in the well-being area and more general principles of best contemporary measurement practice. This work forms the basis of the findings and recommendations in Chapter 5.

3 Defining Student Well-being

3.1 Conceptualising a Model of Student Well-Being

3.1.1 Introduction

In its broadest sense, the notion of student well-being is part of the collective wisdom of educators. The term itself is used routinely in the working vocabulary of teachers and is widely referred to in academic and non-academic education literature. In 1961, Dr. Halbert Dunn used the term *wellness* and provided an early definition of the term that is now used synonymously with the term *well-being* (Warner, 1984). Given that notions of well-being have appeared in academic literature for over 40 years, there have been relatively few attempts made to define the term itself. Ryff and Keyes (1995) noted that ‘the absence of theory-based formulations of well-being is puzzling given the abundant accounts of positive functioning in subfields of psychology.’

Conventional conceptions of well-being have come from the clinical perspectives of health, or the psychological perspectives of mood or affect (Hattie, Myers, & Sweeney, 2004). The clinical tradition has generally operationalised well-being as the absence of negative conditions such as depression, distress, anxiety or substance abuse, whereas the psychological tradition has tended to operationalise well-being as the prevalence of positive self-attributes (Keyes, 1998; Ryff & Singer, 1996). In the psychological tradition, the term well-being is mostly used as a generic qualifier of the degree to which a person exhibits an attribute that is valued. For example, psychological well-being has been described as positive affect, academic well-being as academic achievement and mental and physical well-being as mental and physical health (Carr-Gregg, 2000b; G. N. Marks & Fleming, 1999; Rickwood, Boyle, Spears, & Scott, 2002; Whatman, 2000; Wyn, Cahill, Holdsworth, Rowling, & Carson, 2000).

As a consequence of this pervasiveness and lack of specificity of notions of well-being, the education sector has been presented with an ironic paradox: there is unequivocal consent that it is essential to consider, monitor and respond to student well-being and yet there is little sector-wide consensus on what student well-being actually is.

The way to resolve this paradox is to establish a common definition of student well-being that is applicable across the education sector. This would support greater consistency of dialogue and efficient sharing of resources in considering, monitoring and responding to student well-being issues. Such consistency is highly desirable as it could lead to significant efficiencies in policy and planning, as well as facilitating more rapid development of understandings and programs through the application of a unified conceptual approach.

It is important to note however, that a danger of using a consistent sector-wide definition of student well-being is that there may be a consequent loss of local independence for schools to conceptualise well-being in the way best suited to their own local contexts. The significance of this danger should not be underrated. Any

sector-wide definition of student well-being must be broadly applicable to a range of local contexts.

3.1.2 Defining the school community as the context for student well-being

Student well-being cannot be viewed in isolation from the broader school context (Battistich et al., 1997; Carr-Gregg, 2000a, 2000c; Fuller, 2000; Leary, 2000; Rickwood et al., 2002). Schools provide both a context, and can act as the agents of change for student well-being. Seiboth (1994) advocated whole school practices in addressing student mental health issues and noted that ‘the individual school system, rather than students or teachers, should be the focus for the intervention.’ In referring to the ‘individual school system’ Seiboth was describing the whole school community in contrast to individual teacher-student interactions as a context for reform. Similarly Rickwood et al. (2002) and Beckett (2000), for example, emphasise the importance of whole school approaches to supporting and improving student well-being.

The concept of a *school community* has been defined with a range of fundamental emphases including belonging (Goodenow, 1993), participation and influence (Goodenow, 1993; Solomon, Watson, Battistich, Schaps, & Delucchi, 1992), values (Higgins, 1984) and commonality (D. W. McMillan & Chavis, 1986). Common to these emphases is the understanding that, at some level, the scope of a school community would be defined by the internalised perceptions of its members. In essence such definitions describe the *school community* as a psychological rather than practical construct. The advantage of this approach is that it promotes a definition of community that is independent of the nominal or categorical attributes of its constituents. For example, according to such definitions, any given student or teacher will not be attributed membership of a *school community* simply because they exist as part of the organisation that is ‘the school’. Conversely such definitions necessitate the measurement of the psychological attribute that defines *school community* in order to establish whether or not a *school community* exists and whether or not any given individual can be considered to be a member.

In order to fulfil a role as an environmental context for student well-being, *school community* must be defined so that any school community is readily identifiable according to its function, rather than inferred from the cognitive and affective attributes of its members. Beckett (2000), in his measurement and evaluation of schools as caring communities, defined community as ‘a cohesive caring group with a shared purpose’. Omitting the affective term ‘caring’ from Beckett’s definition leaves notion of community as a cohesive group with a shared purpose. This enables a definition of *school community* to be constructed around practical manifestations of the remaining two characteristics of Beckett’s definition, cohesion and shared purpose. The *school community* can thus be defined as the *cohesive group with a shared purpose that is centred around a school*. The *school community* thus forms the context in which student well-being is to be considered. The advantage of this definition is that it enables any given school community to be identified as including all those people associated with the processes of teaching and learning centred around the school. This is an inclusive rather than exclusive definition of community, as membership is defined by process rather than affect or cognition.

Such a definition does not explicitly include the physical school environment and school facilities. However, it does include the understanding that people are ultimately

3. Defining Student Well-Being

responsible for any school's physical environment. The school community, as a context for student well-being, can therefore be considered in some ways to be a fluid, dynamic system. If, for example, a given school decided to support student well-being by implementing specific teaching protocols at the classroom level, the school community for that purpose could be seen to focus around the students and teachers. If a different school, for example, attempted to improve student well-being by raising funds to renovate classrooms and improve facilities, local government, businesses, and relevant education system representatives may be considered as members of the school community. It is within this context of *school community* that the construct of student well-being is considered.

3.1.3 A model of student well-being

Attempts to synthesise the disparate approaches to well-being most commonly take the form of models in which well-being is conceived as a set of dimensions of an overarching construct. In some cases, the overarching well-being construct is defined explicitly, and in others it is implicitly included as a desirable outcome of notional lifestyle success on its dimensions (Ardell, 1982; Davis, 1972; Hettler, 1984; Ryan & Deci, 2001; Ryan & Travis, 1988; Ryff & Keyes, 1995; Witmer & Sweeney, 1998).

In addition to sharing a common conceptual structure, traditional models of well-being generally:

- deal with adult or life-span well-being rather than childhood and adolescent well-being;
- consider well-being in a holistic rather than a school context; and
- provide a theoretical rather than an explicit measurement framework for considering well-being (Palombi, 1992).

For the purposes of this report, any described model of well-being is focused on children and adolescents in a school context. The model also describes well-being with the intention of developing a *measurement construct* (see page 13), rather than a generalised theoretical framework. The model does, however, follow the conventional conceptual structure of describing well-being as an overarching construct defined by (in this case explicitly measurable) dimensions.

The general principles underlying the model of student well-being proposed by this report are:

1. student well-being is considered in the context of the school community;
2. student well-being can be measured according to its manifestations in the dimensions;
3. the dimensions of well-being are interrelated but sufficiently discrete to be described separately; and
4. there are different levels of student well-being that can be described according to their manifestation in the dimensions.

An overarching definition of student well-being is determined in the following section of this report. The dimensions of student well-being are then described and articulated in Chapter 4.

3.2 Establishing an Overarching Definition of Student Well-being

3.2.1 Introduction

As stated previously, few explicit definitions of well-being exist relative to the prevalence of the term ‘well-being’ in academic literature. Despite this, an analysis of existing definitions of well-being forms an essential starting point in the construction of an overarching definition of student well-being. This section includes a longitudinal sample of academic definitions of well-being from 1946 to 2003. Common elements across the definitions are considered with reference to their contribution to a viable overarching definition of student well-being as a measurement construct.

Evident in the sample of definitions is the evolution of the relationship between health and well-being. Initially well-being was considered to be a component of an overarching construct of health, later health and well-being were considered as complementary, and more recently health has been considered to be a component of an overarching construct of well-being. The first and third definitions in the sample, although arguably relating primarily to health, have been included in the sample to illustrate this evolution.

The sample of definitions also represents the positive tradition of considering well-being as the *presence of wellness* rather than the *absence of illness* (Ryff & Singer, 1996). This focus has been determined by the primary purpose of this report: the development of recommendations for the construction of a measurement instrument of student well-being that is focused on those elements of well-being that are susceptible to school intervention. The measurement instrument to be developed is **not** intended to be a diagnostic tool of mental illness and hence the underlying measurement construct of student well-being, although including facets that are associated with mental health, is based on a growth rather than a deficit model of student well-being.

Some definitions of well-being (1946 – 2003)

1. *Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. (WHO, 1946)*
2. *Wellness is an integrated method of functioning which is oriented toward maximising the potential of which an individual is capable. (Dunn, 1961)*
3. *Taking responsibility for your health means making a conscious commitment to your well-being. It involves a recognition that you choose a positive existence for the pursuit of excellence affecting all four aspects of being – the physical, mental, emotional and spiritual realm. (Ardell, 1982)*
4. *An active process through which you become aware of, and make choices that you hope will lead to, a more fulfilling, more successful, more well life. As such, wellness is an approach that emphasises the whole person, not just the biological organism. (Hettler, 1984)*

3. Defining Student Well-Being

5. *The ability to successfully, resiliently, and innovatively participate in the routines and activities deemed significant by a cultural community. Well-being is also the states of mind and feeling produced by participation in routines and activities. (Weisner, 1998)*
6. *Wellness implies a lifestyle with a sense of balance. This sense of balance arises from a balance, or harmony within each aspect or 'dimension' of life. (Lowdon, Davis, Dickie, & Ferguson, 1995)*
7. *The striving for perfection that represents the realisation of one's true potential. (Ryff, 1995)*
8. *Wellness, or a sense of well-being includes one's ability to live and work effectively and to make a significant contribution to society. (Corbin, 1997)*
9. *A way of life oriented toward optimal health and well-being in which mind, body, and spirit are integrated by the individual to live life more fully within the human and natural community. (Witmer & Sweeney, 1998)*
10. *Well-being – to optimise health and capabilities of self and others. (Tasmania, 2000)*
11. *Well-being is a complex construct that concerns optimal experience and functioning. (Ryan & Deci, 2001)*
12. *Well-being is the state of successful performance throughout the life course integrating physical, cognitive, and social-emotional functions that results in productive activities deemed significant by one's cultural community, fulfilling social relationships, and the ability to transcend moderate psychosocial and environmental problems. Well-being also has a subjective dimension in the sense of satisfaction associated with fulfilling one's potential. (Bornstein, Davidson, Keyes, & Moore, 2003)*

Six key elements of well-being are represented within the above definitions. Each element is not represented in each definition: rather, each definition contains at least one element. These six key elements, their representation in the sample of definitions, and their potential to contribute to an overarching measurement construct of student well-being are now evaluated in detail.

3.2.2 Evaluating the contribution of common elements of definitions of well-being to an overarching definition of student well-being in the school community

Active pursuit

Active pursuit suggests that well-being is the result of conscious effort rather than innate or passive response to the world.

3. Defining Student Well-Being

The notion of active pursuit contributes little to an overarching definition of student well-being as a measurement construct. The active pursuit of one's well-being is unquestionably a desirable attribute. However, it is best considered as a likely behavioural indicator of a component of well-being rather than as essential to the definition of well-being itself. For example, a person may be actively pursuing their well-being because their well-being is poor and they are working to improve it. Conversely, a person with high well-being may act deliberately and consciously to maintain this state. The nature of the different behaviours in the pursuit of well-being may provide evidence of people's actual well-being without requiring the notion of active pursuit to be included in the overarching definition of the well-being construct.

Balance

Balance suggests that well-being depends on the achievement of balance between the different components of well-being.

The achievement of balance between the different components of well-being does not make a useful contribution to a definition of well-being as a measurement construct. From a measurement perspective there are two ways in which balance could be conceived.

The first approach is to consider balance as the degree to which the different dimensions are integrated. If the assumption is that greater integration leads to greater well-being, then this raises the substantive problem of how the different dimensions can actually be meaningfully differentiated. In effect, a person with high well-being could not be measured according to the dimensions of the well-being model, because the individual dimensions would be indistinguishable.

The second approach is to define balance as an equality of function between the dimensions. In theory this could come as a result of measuring and then comparing the dimensions of well-being. The problem with this approach is that equality of measures on the dimensions could be a result of equal measures of any level. For example, by such a measure, a person with very low measures on all dimensions of well-being could be considered as 'well' as a person with very high measures on all dimensions.

Positive affect & life satisfaction

Positive affect and life satisfaction are the degree to which a person feels happy within themselves and with their life. They are considered to be distinct but related elements of a particular well-being construct known as subjective emotional well-being or subjective well-being (SWB) (E. Diener, Lucas, & Oishi, 2002; Lent, 2004).

Lent (2004) refers to the limitations of positive affect and life satisfaction as measures of a broader well-being construct. In particular, that happiness and life satisfaction may operate independently of and even counter-intuitively to the notion of well-being as effective functioning. For example, high levels of happiness or satisfaction may be manifest in people suffering diminished reality-testing capacity through mental disorder, or even by those without disorder who deliberately or

3. Defining Student Well-Being

unwittingly behave in ways that are entirely inappropriate to their contextual environment.

An ancillary limitation to the contribution of positive affect and life satisfaction to an overarching definition of student well-being is the ambiguity of causation between them and other dimensions of well-being. The high reported correlations between positive affect and satisfaction with other dimensions of well-being do not necessarily explain the interaction of the dimensions (Ryff, 1989). According to Ryff and Singer (1998), rather than being the main aspect of well-being, happiness, for example, could be considered to be ‘the by-product of a life that is well-lived’ (Ryff & Singer, 1998).

These limitations were also noted by Pollard and Lee (2003), who concluded that ‘a child’s well-being cannot accurately be assessed by examining only whether or not the child exhibits a particular “mood” or “feeling”.’ Positive affect and life satisfaction are better regarded as contributory but not sufficient indicators of well-being than as essential to an overarching definition of a measurement construct for student well-being (E. Diener, Sapyta, & Suh, 1998).

Prosocial behaviour

Prosocial behaviour suggests that well-being exists when an individual is able to exercise some form of positive social behaviour for the benefit of others.

Prosocial behaviour does not make a useful contribution to an overarching definition for a measurement construct of student well-being. Prosocial behaviour is a desirable outcome that may be demonstrated by those who are sufficiently well. In principle, this means that the capacity to make a contribution to others may exist as an indicator of well-being rather than as a necessary component of a definition of well-being. In practice, this is further supported by the complexity of unpacking the relationship between a notion of well-being and prescribed cultural values. Eckersley (2000) comments that ‘most societies have tended to reinforce values that emphasise social obligations and self-restraint and discourage values that promote self-indulgence and anti-social behaviour’. Making contributions to others is implicitly and explicitly indicated as a desirable educational outcome in all Federal, State and Territory Curriculum Standards documents. It is prominent, prevalent and the way in which it may be manifest is highly culturally specific. Although prosocial behaviour does not make a useful contribution to an overarching measurement definition for student well-being, descriptions of students’ capacity to contribute to others can be considered as possible examples of evidence of student well-being in a multi-dimensional model.

Multi-dimensionality

Multi-dimensionality suggests that well-being incorporates a range of dimensions relating to different aspects of an individual’s life.

The measurement model of well-being developed in this report, as outlined in Section 3.1.3, is multi-dimensional. It is not essential that an overarching definition of student well-being refer to multi-dimensionality. However it is essential that any elaboration of the definition refers to the multi-dimensional nature of student well-being.

3. Defining Student Well-Being

Personal optimisation

Personal optimisation suggests that well-being includes a comparison between a person's actual functioning and notional best functioning. The closer a person's actual functioning is to their notional best, the more 'well' they are considered to be.

One substantive benefit of incorporating the essence of personal optimisation in a definition of well-being is that it is self-referential. This promotes flexibility of the well-being construct as it enables a person's well-being to be assessed relatively independent of their context, without referring to predetermined normative standards.

The problem with this approach is that there is no way of ascertaining the level of any given individual's optimal functioning. As a consequence, the notion of personal optimisation has no practical value as part of a measurable definition of student well-being.

An alternative to personal optimisation is the notion of *effective functioning*. This is based on an evaluation of how a person's responses to their contextual environment support their capacity to satisfy the implicit and explicit demands placed upon them by that environment.

In order to contribute to an overarching definition of a measurement construct of student well-being, the notion of effective functioning demands the articulation of standards against which the effectiveness of a person's functioning can be measured. This can be made possible if there is a well-defined context in which effective functioning is to be assessed. For the purpose of this report, the school context is essential to the construct of student well-being and hence can provide sufficient clarity to notions of effective student functioning. For example, consider two students' responses to receiving poor scores on a test. One student analyses their answers with a view to improving their learning. The other tears up the test, insults their teacher and rushes from the room. If maximising one's own learning is regarded as part of effective functioning in a school context, the second student (at least in the short term) could be considered as functioning less effectively than the first. In such cases, effective functioning can be measured objectively relative to the achievement of contextually based predetermined behaviours.

The notion of effective functioning in the school community supports the description of well-being using overt student attitudes and behaviours that implicitly represent the underlying elements of well-being, and explicitly represent effective school function.

3.3 Recommendations

- I. An operational measurement model of student well-being will refer to student well-being in the school community where the school community is defined as: *the cohesive group with a shared purpose that is centred around a school.*
- II. An operational measurement model of student well-being will consist of an overarching definition of student well-being that is manifest in a set of interrelated but discrete dimensions.
- III. The overarching definition of student well-being for the operational measurement model is that student well-being is: *the degree to which a student is functioning effectively in the school community.*

4. Describing the Dimensions of Student Well-being

4.1 Introduction

The following synthesis of national and international research into well-being aggregates the range of different approaches to well-being into a set of practical and manageable dimensions which can be measured.

In Chapter 3 it was noted that, despite the prevalence of well-being in academic and non-academic literature, the number of explicit definitions of well-being is relatively low. It is therefore not surprising that explicit *measurement models* of well-being are similarly rare in the well-being literature. Pollard and Lee (2003) comment that ‘well-being is a complex, multi-faceted construct that has continued to elude researchers attempts to define and measure it’ and according to Lent (2004), despite the multitude of purported measurement instruments ‘there has been relatively little consensus on how best to measure well-being’. An audit of existing models of well-being reveals that there is significant variation in the magnitude and scope of the dimensions (also referred to as domains) ascribed to well-being.

Table 1 below contains a summary of dimensions of well-being articulated in seven detailed models.

Table 1: Summary of seven multi-dimensional models of well-being.

Authors	Concept of Well-Being	Dimensions
Ryan & Travis (1981)	Efficient energy flow between individual and environment	Self-responsibility and love Breathing Sensing Eating Moving Feeling Thinking Playing and working Communicating Sex Finding meaning Transcending
Ardell (1982)	Self-responsibility	Physical awareness Nutritional awareness Environmental sensitivity Awareness and management of stress
Hettler (1984)	Developing awareness	Physical fitness/Nutrition Occupational vocation Intellectual Society Family Community Environment Emotional Spiritual Values

4. Describing the Dimensions of Student Well-Being

Authors	Concept of Well-Being	Dimensions
Davis (1992)	The individual as a social being	Occupational Physical Financial Social Self-development Recreation Spiritual
Ryff & Keyes (1995)	Positive functioning	Self acceptance Positive relations with others Autonomy Environmental mastery Purpose in life Personal growth
Myers, Sweeney & Witmer (1998)	Holistic function, management of life tasks	Spirituality Work and leisure Friendship Love Self-direction (this dimension/task is divided into 12 sub-tasks)
Bornstein et al. (2003)	Strengths based, holistic	Physical Social-emotional Cognitive

The diversity of foci and structure in the models in Table 1 reflect the elusive nature of the well-being construct (Pollard & Lee, 2003). The changes in the models over time demonstrate the development of the broad conceptualisation of the well-being construct. There has been a transition from an initial emphasis on lifestyle indicators such as occupation or recreation, to an emerging emphasis on personal predispositions such as purpose or social-emotional well-being, that mediate and determine an individual's responses to their environment.

The number of dimensions across the models also ranges from three to twelve. This is indicative of a fundamental balance that is required in articulating the dimensions of well-being. The balance is to identify dimensions that adequately describe the breadth of the well-being construct and yet remain sufficiently discrete to warrant individual description. Embedded in this balance is the question of whether a given dimension can be usefully described as consisting of sub-dimensions. Sub-dimensions are aspects of a dimension that, although indicative of a dimension, may usefully be conceptualised separately for the purposes of understanding the scope of the dimension. The sub-dimensions (or aspects) can also form the substantive foundations for the development of assessment items to measure the well-being of individuals.

4. Describing the Dimensions of Student Well-Being

Broadly common to the models of well-being in Table 1 are notions that well-being has intra- and interpersonal dimensions and that, with the exception of the Ryff and Keyes (1995) model, well-being also has a physical dimension.

Although Table 1 contains a set of explicit models of well-being, this alone is an insufficient picture of the well-being research paradigm. The consensus amongst contemporary well-being researchers is that much of the well-being literature is neither predicated on nor adequately described by any agreed well-being model. It is frequently argued that the research purporting to measure well-being actually relates to only one single domain or indicator of well-being (Hattie et al., 2004; Lent, 2004; Pollard & Lee, 2003; Ryff & Keyes, 1995). It is therefore necessary, for the purpose of determining the dimensions of a measurement construct of student well-being, to consider the range of manifestations of measures and affects that are referred to as 'well-being' in the research literature.

4.2 Defining the Dimensions of Student Well-being

Pollard and Lee (2003) have completed an extensive review of the child well-being literature. From this, they construed five domains that sufficiently represent the well-being construct. By articulating these domains, Pollard and Lee have usefully resolved the balance between the breadth, discreteness and specificity. As such, these five domains form a valuable reference point for the articulation of the dimensions of a measurement model of student well-being in the school context. The five domains of child well-being identified by Pollard and Lee (2003) are:

1. Physical
2. Economic
3. Psychological
4. Cognitive
5. Social.

These five domains are determined as a synthesis of well-being research rather than as dimensions of a measurement model. They cover the breadth of the well-being field. Each of these five domains needs to be evaluated with respect to its value in contributing to the measurement construct of student well-being in the school community (as defined in Chapter 3 of this report). The following evaluations focus on the degree to which the content of each domain:

1. could contribute to *the substantive measurement of* student well-being in the school community;
2. is discrete;
3. may include aspects (sub-dimensions) that can form the basis of a measurement instrument; and
4. can reasonably be considered to be meaningfully influenced by school community.

Physical well-being

The physical well-being domain and its measures include the areas of: nutrition, preventative health care, physical activity, physical safety and security, reproductive health and drug use (Bornstein et al., 2003; Pollard & Davidson, 2001). One

4. Describing the Dimensions of Student Well-Being

unequivocal constant across the physical well-being literature is that school programs that support physical well-being lead to positive health outcomes (Blanksby & Whipp, 2004; Bornstein et al., 2003; Luepker et al., 1996). Schools are generally well informed regarding appropriate health behaviours through both curriculum documents in the Health and Physical Education fields and supplementary programs available to schools to support and nurture student physical well-being. The contribution of measures of physical well-being to a measurement construct of student well-being are however questionable. The physical well-being of students in a school community is, in effect, sufficiently discrete from notions of effective student functioning to be considered as a complementary but autonomous construct. This should not be regarded as a devaluing of the construct of physical well-being but rather an affirmation of its significance as a construct worthy of independent reckoning and investigation. Although physical well-being is unarguably a significant influence on a student's capacity to function effectively within the school community, measures of physical well-being do not contribute to the measurement of effective functioning in the school community. For example, poor diet may affect a student's capacity to function effectively, however diet is not a *measure* of effective function per se. This report does not include physical well-being as a dimension of a measurement construct of student well-being in the school community.

Economic Well-being

Measures of economic well-being within wealthy nations typically include general income measures such as parental occupation, parental education and benefit or support status (Hauser, 1994; J. H. McMillan, Henry, Crosby, & Dickey, 1995; Pollard & Lee, 2003). Measures of economic well-being in poorer nations frequently focus on measures of deprivation such as access to drinking water and sanitation, whether or not a dwelling has an earth or non-earth floor and whether or not a family owns a radio, a television and a bicycle (M. Beckett & Pebley, 2002; Short, 1996). The economic well-being of students is however typically beyond the influence of a school community and, although it is widely regarded as affecting student well-being, the strength and exact nature of its influence is equivocal (E Diener, Eunkook, Suh, Smith, & Smith, 1999; G. N. Marks & Fleming, 1999). For the purpose of this report, economic well-being can be classified in a similar way to physical well-being. Regardless of the effect of a student's economic well-being on their capacity to function effectively within the school community, specific measures of economic well-being do not contribute to the measurement of a student's actual functioning in the school community. This report does not include economic well-being as a dimension of a measurement construct of student well-being in the school community.

Psychological well-being

Psychological well-being is the most pervasive construct in the well-being literature and consistently is referred to as one of the primary outcome measures of well-being. It has been afforded status as an autonomous well-being construct (E Diener et al., 1999; Lent, 2004; Ryff & Keyes, 1995) and as a dimension of broader well-being constructs such as in *Quality of Life* defined by the World Health Organisation (WHOQOL, 1998a, 1998b) and Pollard and Lee's (2003) synthesis of child well-being. The Pollard and Lee well-being construct articulates social and cognitive well-being as independent of psychological well-being. Maintaining this convention, psychological well-being can therefore be considered to be synonymous with the

4. Describing the Dimensions of Student Well-Being

notion of intrapersonal well-being. That is, it becomes those aspects of well-being primarily manifest in a person's internalised sense of self and capacity to function in their surroundings. In the context of the school environment intrapersonal well-being is reported to consist of measurable aspects such as: autonomy, purpose in life, self acceptance, resilience, connectedness, self-efficacy and optimism (Lent, 2004; Pollard & Davidson, 2001; Pollard & Lee, 2003; Ryff & Keyes, 1995; Ryff & Singer, 1996). The aspects of intrapersonal well-being are also reported extensively as being under meaningful influence of the school (Bond, Butler, Glover, Godfrey, & Patton, 1999; Brettschneider, 2000; Carr-Gregg, 2000b; Glover, Burns, Butler, & Patton, 1998; Lent, 2004; Mooij, 1999; Nelson, 2004; Ryff & Keyes, 1995; Wyn et al., 2000). This report includes intrapersonal well-being as a dimension of a measurement construct of student well-being in the school community.

Cognitive well-being

The cognitive well-being domain includes those functions associated with the reception and processing of information that support individuals' interactions with their environments (Pollard & Davidson, 2001). Some models of the cognitive well-being domain focus on constructs of intelligence and reasoning in the context of school-based academic achievement (Pollard & Lee, 2003), whereas others take a broader dispositional perspective that additionally subsumes aspects such as curiosity, mastery motivation and creativity into the cognitive domain (Bornstein et al., 2003). It is universally accepted that schools exert significant influence over the cognitive well-being of their students. This is after all, arguably the primary purpose of schools and the focus of the greatest proportion of their allocated resources. It is also true that schools and school systems already have available to them an overwhelming array of assessment methodologies and materials of the academic achievements of their students. Less prevalent are measures of the cognitive dispositions. However, the dispositional aspects of the cognitive dimension of child well-being articulated by Pollard and Lee (2003) are not sufficiently discrete from a broader intrapersonal dimension of student well-being in the school context to warrant their classification as part of a distinct well-being dimension. Dispositions to cognitive achievement are therefore included in this report as aspects of a broader intrapersonal dimension of a measurement construct of student well-being in the school community.

Social well-being

Social well-being has been afforded status as both a dimension of a larger well-being construct (Ryff & Keyes, 1995) and as part of a broader social-emotional well-being dimension (Bornstein et al., 2003). Typically the social, or interpersonal well-being domain includes aspects such as: empathy, trust, peer relationships and mutual obligation (Bornstein et al., 2003; Ryff & Keyes, 1995). The aggregation of social and emotional well-being to form a single dimension in some well-being models is predicated on the understanding that emotional well-being is frequently manifest as observable social behaviours. This provides an elegant solution in the management of constructs in which well-being is defined broadly to encompass a range of situational contexts. However, the purpose of this report is to define a contextually specific student well-being construct that can be used as the basis for measuring the effectiveness of student functioning in the school community. For this purpose the interpersonal well-being dimension is sufficiently discrete from the intrapersonal dimension to warrant its inclusion as an autonomous dimension of student well-being.

4. Describing the Dimensions of Student Well-Being

It is widely accepted that students' interpersonal behaviours form an essential part of their capacity to function effectively in their school community (Pollard & Lee, 2003; Willard, 1993) and that this capacity for effective interpersonal functioning is under the meaningful influence of school communities (Battistich et al., 1997; L. Beckett, 2000; Fuller, 2001; Leary, 2000; Mooij, 1999; Roberts, 2002; Wyn et al., 2000). Interpersonal well-being is therefore included in this report as a discrete dimension of the measurement construct of student well-being in the school community.

4.3 Recommendations

- I. The operational measurement model of student well-being in the school community should have two dimensions. These are an interpersonal and an intrapersonal dimension.
- II. Each of the two dimensions of student well-being should be defined in terms of a set of constituent aspects. These aspects should form the basis for the development of the measurement items through which evidence of student well-being can be collected.

4.4 Defining the Aspects of the Intrapersonal Dimension of Student Well-being

The intrapersonal dimension of student well-being includes those aspects of well-being primarily manifest in a student's internalised sense of self and capacity to function in their school community. As stated previously, the intrapersonal well-being dimension is the most pervasive of the well-being dimensions in the academic literature and contains the greatest representation of described aspects. The Pollard and Lee (2003) survey of child well-being includes an audit of well-being indicators by domain. In this audit, there are forty-six indicators of positive psychological and cognitive well-being that are subsumed by the intrapersonal well-being dimension. Conversely Pollard and Davidson (2001) include seven discrete aspects (referred to as elements) and Ryff and Keyes (1995) include three components of well-being that that can be classified as comprising the intrapersonal dimension. The diversity of reported aspects of intrapersonal well-being and the range of aspects within given models of intrapersonal well-being are consequences of the previously reported elusive nature of the well-being construct and the balance between specificity, discreteness and practical value that must be struck when defining aspects of a construct for a given purpose.

For this report, the defined aspects represent the substantive breadth and depth of the intrapersonal dimension of student well-being and serve two primary practical purposes. Firstly they provide substance and explicit meaning to each of the dimensions that can form the core of an articulated well-being scale. Secondly they provide the starting points for the development of items that can elicit evidence of and measure student well-being.

The nine aspects of the intrapersonal dimension of student well-being in the school community are: autonomy, emotional regulation, resilience, self-efficacy, self esteem, spirituality, curiosity, engagement, and mastery orientation.

Autonomy

There is extensive evidence to support the importance of autonomy to child and adolescent well-being (Bridges, 2003a). A person is autonomous when their behaviour 'is experienced as willingly enacted and when he or she fully endorses the actions in which he or she is engaged and/or the values expressed by them' (Chirkov, Ryan, Kim, & Kaplan, 2003). This definition takes the perspective of self-determination theory (Ryan & Deci, 2000) and provides a useful contrast to definitions of autonomy that are primarily based on notions of independence and self-government (Pollard & Davidson, 2001). The significant distinction for students in the school context comes when considering the role of independent actions as indicative of effective function. The self-determination perspective of autonomy supports the notion that autonomous actions can be manifest by independent and dependent action. Chirkov et. al. (2003) make the point that a person can be 'autonomously dependent on an other, willingly relying on his or her care, particularly if the other is perceived as supportive or responsive.' In this sense, autonomy is regarded as being mediated by context. In schools, independent student action may or may not be the most effective in a given context. For example, students need to be able to self-monitor sufficiently to know when to ask for assistance from their

teachers or peers, and when and how to function successfully with others. The independent action of brazenly pushing on without evaluating the possible benefits of working with (i.e. depending on) others would be regarded as indicative of a low level of reflective autonomy (Koestner et al., 1999). Autonomy includes the degree to which students can show an internal locus of evaluation with which they can accurately evaluate themselves and their needs as they function in the school community (Ryff & Singer, 1996). Students with high levels of autonomy would typically be self regulating and able to plan and evaluate their actions independently of social pressure. Students with low levels of autonomy would typically be overly concerned about the expectations and judgements of others in guiding, framing and evaluating their actions. (Bridges, 2003a; Ryff & Keyes, 1995; Ryff & Singer, 1996).

Emotional Regulation

Salovey et al. (2003) define a four-branch (four-dimension) model of emotional intelligence that specifies *managing emotion* as one of the dimensions. They summarise the managing emotion dimension of emotional intelligence as ‘the ability to be open to feelings, to regulate them in one’s self and others to promote personal understanding and growth’. Emotional regulation forms the core of this ability and includes the processes of monitoring, evaluating and modifying emotional reactions (Pollard & Davidson, 2001). In the school context it is manifest by the degree to which a student’s emotional responses are of an appropriate type and magnitude to the events that surround them. Students with high levels of emotional regulation would exhibit a range of emotional responses that are consistently appropriate to their social and situational context in the school. Examples of students exhibiting low levels of emotional regulation may be when expressions of emotion are extreme given the context (such as outbursts of violent anger or frustration) or when students engage in behaviours that contravene social norms in order to satisfy immediate needs (such as stealing or cheating) (Graziano, Jensen-Campbell, & Finch, 1997).

Resilience

Resilience is the capacity to manage, recover and move on from critical challenging events that tax or exceed a person’s resources (Cunningham, Brandon, & Frydenberg, 1999). Resilience can be regarded as synonymous with the term *coping* as used by the positive psychology movement (Pollard & Davidson, 2001; Schwarzer & Knoll, 2003) and it forms an explicit focus of many programs aimed to support student well-being in schools (Bond et al., 1999; Fuller, 2000; Leary, 2000; Wyn et al., 2000). The challenging events that elicit resilient responses vary greatly in substance and severity. For example, they may range from obstacles such as nervousness before a test through significant life stressors such as the death of a close relative (Lazarus & Folkman, 1984). There is a significantly smaller set of challenging events that most students are likely to experience in the school that can form the bases for the collection of evidence of student resilience in the school community context. Typically such events would include real or hypothetical learning and social challenges.

Models of resilience distinguish between whether resilience strategies are required in response to or in anticipation of a critical challenge. They also distinguish between resilience strategies and resilience styles (Sandler, Wolchik, MacKinnon, Ayres, & Roosa, 1997; Schwarzer & Knoll, 2003). Measures of resilience typically focus on a

narrow range of coping strategies (Bridges, 2003b), and can be confounded by the highly situational-dependent nature of expressions of resilience (Schwarzer & Knoll, 2003). The model of resilience adopted for this report accounts for these measurement difficulties by focusing only on student expressions of resilience in a set of specific hypothetical school contexts. According to this model, evidence of differing levels of student resilience will be made manifest by matching students to the explicitly described responses they are ‘most likely’ to exhibit to a range of hypothetical school based challenging events. The coping responses, described in terms of student function in the school community, reflect coping strategies indicative of different levels of contextualised resilience.

Self-efficacy

The fundamental self-efficacy construct was first articulated by Bandura as part of his social cognitive theory (Bandura, 1977, 1986) and it remains a pervasive and stable construct in psychology (Pajares, 1996). Self-efficacy refers to the degree to which a person believes themselves able to organise, execute and adapt strategies to meet desired outcomes (Bandura, 1986; Smith, 2003). Self-efficacy beliefs are positively associated with school performance (Zimmerman, Bandura, & Martinez-Pons, 1992) and this has been explained both in terms of the accuracy of students’ judgements about their own capacities and the positive association between high levels of self-efficacy and persistence and perseverance (Bouffard-Bouchard, 1990; Lent, Brown, & Larkin, 1984). The measurement of self-efficacy is domain specific and must be highly contextualised (Bandura, 1997). In the school context, students with high levels of self-efficacy would feel confident of their capacity to manage the academic and social tasks they encounter. High levels of contextual specificity in the measurement of self-efficacy help to protect against the confounding influence of competence, ability and outcome expectations (O'Brien, 2003). The measurement of student self-efficacy in the school context therefore involves the interpretation of a range of hypothetical and/or authentic student behaviours in across a range of contexts.

Self esteem

Self esteem, like self efficacy, is a component of the broader construct of self concept. Self concept deals with the totality of one’s cognitive beliefs about oneself. It includes our knowledge of, for example, our physical features, race, gender, likes and beliefs (Heatherton & Wyland, 2003). Self esteem, also known as self acceptance (Ryff & Singer, 1996) describes the affective component of self concept; it refers to the way people feel about themselves (Zaff & Hair, 2003) and is regarded as fundamental to constructs of intrapersonal well-being (Ryan & Deci, 2001). Self esteem has been conceptualised as including three main components, *performance* self-esteem, *social* self-esteem and *physical* self esteem (Heatherton & Polivy, 1991). These three components of self esteem provide useful conceptual bases for the purpose of constructing measurement items to elicit evidence of student self-esteem.

Self-esteem is a construct that has been often regarded as poorly defined and measured. Heatherton and Wyland (2003) comment that ‘there are a large number of self-esteem instruments and many of these correlate poorly with one another.’ One cause of these inconsistencies is the dependence of measures of self esteem on context or development. The frequently reported declines in self-esteem from childhood

4. Describing the Dimensions of Student Well-Being

through early adolescence (Frey & Ruble, 1985; Harter, 1999), for example, may either be genuine representations of changes in self-esteem, or different age related manifestations of self-esteem. Assessment items that elicit evidence of student self-esteem must be based on its manifestations as functioning in the school community that are explicitly age and context appropriate.

Spirituality

Spirituality is defined as a positive sense of meaning and purpose in life (Adams & Benzer, 2000; Tsang & McCullough, 2003) and is an essential component of many models of well-being (Adams & Benzer, 2000; Ryff & Keyes, 1995). Spirituality is distinct from but can include religiosity. The distinction between spirituality and religiosity is determined by the role of the sacred. Religiosity includes the requirement that a person is involved in the active search for and maintenance of faith in a notional divine entity or object (Hill, Pargament, Hood, McCullough, & Swyers, 2000). This is subsumed by the more general construct of spirituality as a sense of meaning or purpose. Both constructs can represent the range of religious beliefs and practices and the highly personalised nature of individual faith. The broader notion of spirituality, however, also represents notions of purpose and meaning derived from the individual systems of moral and social belief and purpose that are not linked to a belief in the sacred. The importance of this distinction is highlighted by Adams and Benzer (2000) who noted that ‘it is possible for individuals to be both spiritual and religious ... to be spiritual without religion ... or to be religious without being spiritual.’

In the school context, evidence of effective student function indicative of spirituality will be manifest by demonstrations of directedness; connection to the past present and future worlds around them (beyond the school community); and consistency in expression of fundamental beliefs that drive students and give purpose to their lives (Adams & Benzer, 2000; Ryff & Keyes, 1995; Ryff & Singer, 1996).

Curiosity

Curiosity is the intrinsic desire to learn more (Pollard & Davidson, 2001). In students it is a motivational force that is manifested by its capacity to energise and control the direction of learning behaviours such as information seeking and problem solving (Litman & Jimerson, 2004; Wentworth & Witryol, 2003). In the school context, curiosity will be manifested by students’ capacity to engage with school based tasks independent of perceptions of external reward, and to devise and focus on strategies to explore learning. It may also be the case that, for older students in particular, evidence of high levels of curiosity will be manifested by engagement in tasks in areas that a student either dislikes or feels less confident of achieving. Although curiosity motivation has been positively correlated with academic achievement (Alberti & Witryol, 1994; Cahill-Solis & Witryol, 1994), evidence of curiosity in a school context would come from the *processes* rather than the outcomes of student task completion.

Engagement

Student engagement includes both engagement with the learning process and engagement with the school community. Learning engagement includes the ‘attention, interest, investment and effort students expend in the work of learning’ (H. Marks,

2000). School community engagement includes students' feelings about, responses to, interactions with and participation in the culture and traditions of the school as well as in school community activities and events such as sporting teams, clubs and student representation (Finn, 1993). Student engagement is highly valued by educational administrators and is regarded as a fundamental measure of school and student well-being. Student engagement is a manifestation of effective function through the quality and range of student participation in learning and school community life.

Mastery Orientation

Mastery orientation is defined as the desire to complete tasks to the best of one's ability. It can be seen as an extension of the notion of mastery motivation that is used predominately to refer to children under the age of 5 years (Jennings & Dietz, 2003). The broader construct of environmental mastery (Ryff & Keyes, 1995; Ryff & Singer, 1996) can be regarded as subsuming mastery orientation and engagement. Mastery orientation is identified as distinct from engagement in the current construct of intrapersonal well-being because of the contextual specificity brought by the overarching definition of effective student function in the school community. Mastery orientation is distinguishable from curiosity by its focus on the achievement of personal excellence in school tasks rather than the acquisition of the new tasks. In the school context, evidence of mastery orientation is primarily manifested by the degree of effort students put into the completion, refinement and improvement of the learning and community tasks they undertake as part of their school life.

4.5 Defining the Aspects of the Interpersonal Dimension of Student Well-being

The interpersonal dimension of student well-being includes those aspects of well-being that are only evident through a person's interactions with, or responses to others. It is the appraisal of one's social circumstances and consequent social function (Keyes, 1998). Typically, models of interpersonal well-being have included fewer aspects than models of intrapersonal well-being (Pollard & Lee, 2003). More frequently represented aspects in models of interpersonal well-being include: positive relations with others, the need for relatedness, social connectedness, attachment and social support (Lent, 2004).

The four aspects of the interpersonal dimension of student well-being in the school community are communicative efficacy, empathy, acceptance, and connectedness.

Communicative efficacy

Communicative efficacy draws on aspects of social competence (Willard, 1993) and positive relations with others (Ryff & Singer, 1996, 2002). It is the use of communicative skills in context to achieve a purpose. Communicative efficacy is relational in that it depends on the social impact of interactions (Ewart, Jorgensen, Suchday, Chen, & Matthews, 2002) and hence the communicative context in which interactions occur. In order to function effectively in the school community, students need to interact with all members of the school community including other students from all levels of the school, teachers, parents and school partners. Communicative

4. Describing the Dimensions of Student Well-Being

efficacy represents students' capacity to use effective and contextually appropriate communicative skills across the range of school contexts for a range of purposes.

Empathy

Empathy has remained a contentious construct in psychological research despite the efforts of some researchers to clarify and assimilate its differing theoretical perspectives (Duan & Hill, 1996). One point of difference in empathy research has been in identifying the nature and relative roles of empathy as affect, and empathy as cognition. Gladstein (1983) attempted to resolve this by proposing that the affective and cognitive elements of empathy be regarded as separate constructs. He proposed that cognitive empathy be defined as 'intellectually taking the role or perspective of another person' and affective empathy as 'responding with the same emotion to another person's emotion' (Gladstein, 1983). This distinction between empathy as an intellectual process and empathy as an emotional response allows for different manifestations of empathy according to context (Duan & Hill, 1996). Students, in the course of their everyday school experience, may be called upon to demonstrate both cognitive and affective empathy in different contexts as indications of effective function. Typically, cognitive empathy will be evident when students are called upon to express their understandings of the thoughts and feelings of others as part of academic learning tasks (such as in the analysis of a text) or in social learning tasks (such as part of a drug or bullying education program). Students may provide evidence of affective empathy through their participation in some learning tasks, although evidence of affective empathy is more likely to be gathered through reflection on students' social interactions.

Acceptance

Acceptance is the 'construal of society through the character and qualities of other people' (Keyes, 1998). Acceptance is founded in students' beliefs about the fundamental goodness of others and therefore is an inclusive construct that subsumes the frequently cited interpersonal values of respect, tolerance and understanding. Students with high levels of acceptance will demonstrate positive attitudes to their peers, teachers and other members of the school community. They will provide evidence of trusting others and feeling comfortable with other members of the school community in most contexts demonstrating a dispositional favourable attitude to the individual and collective members of the school community.

Connectedness

Interpersonal connectedness is the 'subjective awareness of being in close relationship with the social world' (Lee & Robbins, 1998). It represents a meaningful linkage with a 'wide range of people and a diversity of peers' (Fuller, 2000). In the school community, connectedness will be represented by the number, range, quality and appropriateness of social relationships students develop. Evidence of high levels of connectedness will come from student demonstrations of successful, purposeful relations with a range of their peers, teachers and other members of the school community across a range of contexts.

4.6 Recommendations

- I. The intrapersonal dimension of the operational measurement model of student well-being should be defined as: a student's internalised sense of self and consequent capacity to function in their school community.
- II. The intrapersonal dimension of the operational measurement model of student well-being should be comprised of nine aspects:
 - autonomy
 - emotional regulation;
 - resilience
 - self-efficacy
 - self esteem
 - spirituality
 - curiosity
 - engagement
 - mastery orientation.
- III. The interpersonal dimension of the operational measurement model of student well-being should be defined as: a student's appraisal of their social circumstances and consequent capacity to function in their school community.
- IV. The interpersonal dimension of the operational measurement model of student well-being should be comprised of four aspects:
 - communicative efficacy
 - empathy
 - acceptance
 - connectedness.

5. Measuring Student Well-Being

5.1 Introduction

Despite the abundance of instruments and methods used to describe and measure well-being there is little consensus on how best to measure it (Lent, 2004; Pollard & Lee, 2003).

The most common approach to measuring well-being is the use of multiple individual assessments of the indicators of well-being that are articulated by a given model. According to Pollard and Lee (2003), the overwhelming majority (as many as 80%) of measures of well-being collect data on only one dimension or indicator rather than on well-being as a larger construct. Examples of multi-factorial assessments that address one dimension of well-being include the Perceived Competence Scale for Children (Harter, 1982), the Multidimensional Students' Life Satisfaction Scale (Huebner, 1994), the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and the Perceived Wellness Survey (Adams & Benzer, 2000). Examples of multi-dimensional assessments of well-being include the Wellness Inventory (Travis, 1981), the Lifestyle Assessment Questionnaire – Wellness Inventory Section (National Wellness Institute, 1983) the Lifestyle Coping Inventory (Hinds, 1983) and the Wellness Evaluation of Lifestyle (Myers, Sweeney, & Witmar, 1998).

Student attitudes to schooling are frequently associated with measures of well-being (Ainley, Batten, Collins, & Withers, 1998; Linnakyla, 1996; Mok & Flynn, 2002). In Australia, multi-dimensional surveys of student attitudes to school are conducted routinely across the States and Territories. The survey instruments, although constructed, owned and administered by individual State and Territory jurisdictions, have largely been modelled on the pervasive and well validated Quality of School Life Survey. This was originally developed by Williams & Batten (1981) for use with secondary school students and subsequently adapted by a number of researchers for use with secondary as well as primary school students (Mok & Flynn, 2002). Examples of such surveys are the Victorian *Attitudes to School Survey*, the Queensland *School Opinion Survey* and the ACT *School Development Questionnaire*. These surveys focus on students' perceptions of and attitudes to their schooling. The data obtained from these surveys make valuable contributions to school planning. However, they do not represent the depth or breadth of the two-dimensional measurement construct of student well-being detailed in Chapters 3 and 4 of this report.

Two broad categories of evidence of well-being are collected. Objective measures include case histories, educational assessments, death rates and criminal offence rates. Subjective measures typically involve self-reported well-being (Pollard & Lee, 2003). The measures of well-being classified and cited above are all examples of subjective, self-report surveys. The subjective Likert Scale self-report survey is the predominant form of well-being assessment instrument (Lent, 2004). Self-reports are used almost exclusively to provide evidence of well-being for all people except children too young to be able to respond reliably.

5.2 A Proposed Methodology for Measuring Student Well-Being

Following is a detailed outline of the proposed methodology for measuring student well-being. This methodology comprises two components. The first component is the measurement instrument designed to collect evidence of student well-being and the second is the method for using the measurement instrument to collect evidence of student well-being in schools. A similar methodology (instrument and implementation) is currently being implemented by ACER in the development of pilot assessment materials for the social outcomes of schooling in Western Australia.

5.2.1 Component 1: the measurement instrument

The proposed measurement instrument comprises a set of items that address different aspects of the two dimensions of student well-being. Each item provides a set of behaviours that describe responses to everyday school situations, or responses to hypothetical situations. Each behaviour represents a different level of well-being. For each item, respondents are required to select the behaviour, or likely behaviour, that best represents the individual student being assessed.

For example, following are two items from the survey of student self-management currently being used in the Western Australian pilot study. These items represent generalisable student behaviours that provide evidence of the construct of Persistence/Determination as described in the Western Australian study. The items provide examples of the *structure* rather than the substance of the items for the measurement instrument proposed in this report. The construct headings do not appear in the published surveys but have been included for convenience in this report.

Example Item 1

(Persistence/Determination Year 3)

- 1 The student persists with classroom tasks that he/she finds difficult or not necessarily enjoyable.
- 2 The student generally persists with tasks although sometimes relaxes when they feel a task is too difficult or unenjoyable (boring).
- 3 The student shows very little persistence with tasks. He/she is quick to give up and frequently will say that this is because a task is too hard or boring.
- 4 Unable to judge

Example Item 2

(Persistence/Determination Years 7 and 10)

- 1 The student works consistently to achieve long and short term goals. The student persists with tasks that he/she finds difficult both in class time and out of school. The student may, for example, work into lunchtime or take work home to complete it to the best of their ability without prompting by the teacher.
- 2 The student works consistently to achieve short term goals within class. The student persists with tasks that he or she finds difficult although generally the student will not take work home or persist unsupervised without prompting by the teacher.
- 3 The student persists with tasks that he/she finds enjoyable and easy, but tends to relax when tasks are complex or appear less interesting. The student will readily return to task when encouraged by the teacher, but generally this will not last long before further encouragement is required. The student will complete simple tasks independently away from the classroom.
- 4 The student shows little persistence with tasks. He/she requires frequent encouragement to complete tasks and rarely, if ever, completes tasks away from the classroom.
- 5 Unable to judge

Sample assessment items from the current ACER pilot study to collect evidence of student self-management in Western Australian school students. These items have been included as examples of the structure rather than the substance of the assessment items for the teacher survey of student well-being outlined in this report. The construct headings would not appear on the final survey forms.

The measurement instrument proposed by this report comprises assessment items of similar structure to Example Items 1 and 2.

In addition to these item structures, some items will begin with specific hypothetical school scenarios that are followed by a set of possible student response behaviours. This second item type differs only from the structure of Example Items 1 and 2 by the presence of the initial hypothetical scenario.

Strengths of the instrument: contextual specificity

The proposed instrument uses explicitly described school contexts and student behaviours. As such, the instrument has high face validity as a measure of the effectiveness of student function in the school context.

Respondents to the instrument base their judgements on examples of genuine scenarios and student behaviours. This supports the accuracy of the judgements, as respondents are evaluating the familiar rather than their own internalised understandings of the aspects of the underlying well-being construct.

Strengths of the instrument: applicability across different levels

Example Items 1 and 2 demonstrate one way in which evidence of the different manifestations of an aspect of student well-being can be obtained for students at different levels of schooling. The different behaviours described in Example Items 1 and 2 relate specifically to school function at different levels of schooling. Following this model it is possible to collect evidence of and meaningfully describe student well-being at different levels of schooling.

Using this design it would be possible to construct three separate but linked survey instruments. For example, linked surveys could be developed for the lower primary (P-4), middle (5-8) and senior (9-12) years of schooling. Linking the surveys through commonly applicable items would facilitate the development of well-being measurement scale(s) across all years of schooling. This process is further described in the recommendations for Phase 2 in Chapter 6.

Limitations of the instrument: Cultural Specificity

Constructs of well-being are understood by researchers to be both culturally specific (Compton, 2001, Christopher, 1999) and yet also to contain components that can be generalised across cultures (Diener and Suh, 1999). Lent (2004) makes the distinction between the cultural specificity of manifestations of well-being (between collectivist and individualist cultures) and the underlying universality of the nature of the components of well-being they represent.

A key question for this report is whether it is possible to construct a measurement instrument that collects accurate evidence of student well-being independent of the students' cultural backgrounds. The overarching definition of well-being as effective function in the school community supports the cultural generalisability of the instrument. It is highly likely that, throughout Australian schools, there would be strong consensus regarding the effectiveness of function of any given set of behaviours in a school community.

Substantive investigation of the question would involve an analysis of cultural breadth with which effective function is described in the survey items. This can be undertaken during and or after the construction of the assessment items.

One example of a social group that may be seen to be at risk of misrepresentation by the instrument is Indigenous Australian students. Indigenous Australian students represent a group that has been, and continues to be, consistently misrepresented by non-Indigenous Australian educational outcomes (Whatman, 2000).¹ It is essential that the cultural relevance of the assessment instrument be confirmed before the instrument is used to measure the well-being of Indigenous Australian students.

Should the instrument be deemed not to be a culturally valid measure of student well-being for a given group of students, then a culturally valid instrument should be constructed. Such an instrument can be linked to the general survey instruments

¹ McConaghy (2000) comments on the tendency for non-Indigenous Australian outcomes to focus on the deficits of Indigenous Australians with respect to non-Indigenous Australians so that 'non-Indigenous people emerge as the heroes and Indigenous people as the hapless victims of the twentieth century' (McConaghy, 2000).

through the use of commonly applicable items. This will be further outlined in the recommendations for Phase 2 in Chapter 6.

5.2.2 Component 2: use of the measurement instrument

The measurement instrument proposed in this report could be implemented in schools in the following three ways:

- student self-reports;
- teacher rated judgements; and
- a mixture of student self-reports and teacher judgements.

The advantages and limitations of each approach in the measurement of student well-being in the school community are now discussed in detail.

Student self-reports

In order for the survey to be administered as a student self-report the individual assessment items would be written to describe first-person experiences and behaviours. The prevalence of self-reports as measures of well-being is primarily a result of the high face validity of self-report measures of intrapersonal constructs, in particular for those constructs, such as Subjective Well-Being, that focus on the affective domain.

However, recent reviews of the well-being domain have begun to question the value of self-report measures of well-being. Heatherton and Wyland (2003) note that when measuring well-being ‘a major problem is the extent to which self-reports are influenced by self presentational concerns’ and Lent (2004) comments that ‘although self-report measures may be indispensable in the study of well-being, it is also clear that external indicators or perspectives would be necessary to establish other aspects of optimal functioning such as work-role effectiveness or social adjustment.’

The primary limitation of the self-report as an indicator of student well-being is the degree to which it is possible to trust the authenticity of student responses. As indicated by Heatherton and Wyland (2003), students’ perceptions of how they can best present themselves in their given context may affect the integrity of their responses. For example, students wishing to avoid the attention of their teachers and parents may artificially inflate their self-reported well-being measures. Conversely, students desirous of attention, or perhaps curious, of the consequences may artificially lower their self-reported well-being scores.

Self presentational concerns are most likely to influence students who can be identified and linked to the data obtained from a measurement instrument of individual well-being, such as the one recommended in this report. Self presentational concerns are likely to be less significant when students are responding to collective measures of well-being such as the Quality of School Life survey and its derivatives.

A secondary limitation of self-report measures is that they can only be used with students who have sufficiently developed cognitive and language capacities to answer the questions. The implementation of the measurement instrument recommended in

this report as a self-report survey would therefore be limited for use only with middle (Years 5-8) and senior (Years 9-12) school students.

In order to construct a common scale of student well-being across the year levels of schooling is necessary for the different survey level specific instruments be linked by common assessment items. Common assessment items must be identical both in substance and implementation. If self-reports are not used with junior primary students then they cannot be used as common material with middle or senior students.

The limitations of self-reports, for the purpose of collecting evidence of student well-being as effective function in the school context, are significant. The accuracy of student self-reports is likely to be compromised students' cognitive and meta-cognitive capacities and by student self presentational concerns. In addition to this, self-reports are unsuitable for use with junior primary students which further limits the implementation and subsequent use of the proposed measurement instrument. For these reasons, the self-report method is not recommended for the implementation of the proposed measurement instrument in this report.

Teacher judgements

In order for the measurement instrument proposed in this report to be administered using teacher judgements, the individual assessment items would be written to describe third-person experiences and behaviours (as seen in Example Items 1 and 2 on pages 37-38). There are several advantages in using teacher judgements to collect evidence of student well-being in the school context: teachers are less likely to be influenced by presentational concerns than students, teachers are experienced in making professional judgements about their students and teachers have expert knowledge and understanding of effective student functioning in school communities. Although teachers clearly do not have the intrapersonal expertise of their individual students, they are expert at making professional judgements about their students' functioning in school. Both Pollard and Lee (2003) and Lent (2004) advocate the use of external multi-dimensional measures of function to measure well-being.

The primary limitations of using teacher judgements to measure student well-being are the potentials for inaccuracy and inconsistency. The accuracy and consistency of teacher judgements are two different but intrinsically related issues.

Teacher judgements are likely to be more accurate when teachers are provided with quality information and training. Ter Laak et. al (2001) recommend the use of 'specific elaborations of the central constructs' to maximise the accuracy of teacher judgements of student inter- and intrapersonal characteristics. The assessment item structure proposed in this report provides teachers with explicit elaborations of the behavioural manifestations of the aspects of student well-being. As stated earlier, the capacity for teachers to reflect on real scenarios rather than their internalised understandings of the aspects supports the accuracy of the teacher judgements. The accuracy of teacher judgements can also be enhanced by having each student rated by more than one teacher.

Judgements of each student by more than one teacher enables consistency to be used as a measure of the accuracy of individual teacher judgements. Those judgements aberrant from consensus are regarded as less likely to be accurate. This method is

predicated on the assumption that the collective body of teachers has been provided sufficient information and training to make accurate, objective judgements. In the case of the measurement of student well-being, it is however true that the consistency of the teacher judgements of a given student may be influenced by the amount of time and the specific contexts in which each different teacher has contact with the student. This can be accounted for by selecting only those teachers with sufficient contact and knowledge of a given student to complete the survey. The precise nature of variations in teacher judgements across students can only be known once real data from teachers have been collected and analysed. This can then inform the implementation of any further necessary statistical or methodological mediation of variations in teacher judgements. This process will be further outlined in the recommendations for Phase 2 in Chapter 6.

For the purposes of this report, the use of teacher judgements of student well-being has significant advantages over the use of student self-reports. The primary limitations of teacher judgements can be mediated through the level of detail of student experiences and behaviours in the survey instrument, the provision of appropriate training and support and the use of multiple teacher judgements of each individual student.

Using student self-reports to enhance our understanding of students

Teacher judgements are recommended by this report as the best method to collect evidence to *measure* student well-being. However, this does not negate the potential research value in collecting student self-report information for comparison with the known measures derived from the teacher judgements. This would enable evidence to be collected of the disparities and consistencies between student self-report and teacher judgements of students' effective function in the school community.

5.3 Recommendations

- I. The measurement instrument should consist of two types of assessment items. The assessment items should be either a school based scenario followed by hypothetical student responses, or of a set of generalisable student behaviours independent of context. Each item should be predominately representative of a single aspect of student well-being as defined by this report. The different responses to each item should implicitly indicate different levels of the relevant aspect and explicitly indicate different levels of effective function in the school community.
- II. The measurement instrument should be administered as teacher surveys using a number of teachers' judgements of each student.

6. Moving Forward: Recommendations for Phase 2

6.1 Introduction

This report provides recommendations regarding the definition and measurement of student well-being. Figure 1 on page 12 details the place of this report in the full process of assessing, reporting on and responding to student well-being.

In Chapters 3 and 4, a measurement construct of student well-being in the school community is defined. In Chapter 5 recommendations are made regarding the structure of the assessment items to collect evidence of student well-being and the best methodology to implement the measurement instrument. Together these comprise Phase 1 as outlined in Figure 1.

This chapter provides recommendations about the construction, refinement and validation of a measurement instrument of student well-being. Recommendations are also provided about the ways data collected using the instrument can be used to construct a well-being framework against which student well-being can be reported. The recommendations in this chapter encompass Phase 2 and some detail of the Implementation Phase of the global process described in Figure 1.

6.2 Constructing a Measurement Instrument

6.2.1 Developing three linked measurement instruments

As recommended in Chapter 5, a minimum of three separate teacher surveys of student well-being should be constructed: a lower primary (Years P-4), a middle (Years 5-8) and a senior (Years 9-12). The scenarios and behaviours contained in each survey will be selected on their relevance to each of the three levels of schooling.

The surveys should also include a set of common items between adjacent surveys (lower and middle and middle and upper). These common items comprise scenarios and student behaviours that are relevant to both year levels. Linking the surveys through common assessment items enables the construction of a joint scale to describe student well-being across all levels of schooling. As stated in Chapter 5, each individual assessment item is to be developed to reflect one aspect of one dimension of student well-being. Each aspect of well-being should be addressed by more than one item in each survey.

6.2.2 Optional development of additional measurement instruments

Using a common item methodology it would be possible to link additional instruments to the set of three surveys. For example, it would be possible to develop linked survey instruments targeted to assess the well-being of pre-school and Indigenous Australian students.

6.3 Trial testing the assessment instruments

After the measurement instruments have been constructed it is essential that they are trial tested in a sample of schools in order to refine and validate the both instruments and the well-being construct. Qualitative data regarding the implementation

methodology and substantive content of the surveys are collected. Quantitative data of the evidence of student well-being from the instruments are also collected. These data are then analysed and used to:

- review and refine the survey implementation process;
- validate the substantive and measurement properties of the assessment items; and
- validate the measurement model of student well-being.

The trial processes are now outlined in greater detail.

6.3.1 Review and refinement of the survey implementation process

This process includes a quantitative review of the multiple teacher ratings of student well-being. This review will provide evidence of the consistency of the teacher ratings. This evidence can then be used to inform the way in which multiple teacher ratings are to be used and incorporated into the final measurements of student well-being.

This process also includes a review of the teacher and school experiences of using the assessment instruments. Teachers and schools have the opportunity to provide feedback on the content and implementation of the survey materials. This feedback is then used to refine the implementation procedures.

6.3.2 Validation of the substantive properties of the assessment items

This process includes quantitative analyses of the assessment items to support the validation of the substantive and measurement properties of the items. Items that appear to be measuring something other than well-being can be identified. These items can then be edited or removed from the assessment materials.

In addition to this, qualitative teacher and school feedback on the substantive properties of the assessment items is collected. This feedback is also used to validate the substance of the assessment items.

6.3.3 Validation of the measurement model of well-being

The quantitative analyses of the student data from the assessment instruments are then used to validate the overall structure and substantive detail of the measurement model of student well-being. These data will provide evidence of the discreteness of the intra- and interpersonal well-being dimensions and the substantive and measurement contribution of the aspects of each dimension to the well-being construct. This evidence can then be used to refine the measurement model.

Qualitative teacher and school feedback on the substantive properties of the assessment items is also used to validate the measurement model of student well-being.

6.4 Constructing and reporting against a well-being framework

After the measurement instruments and the well-being model have been validated, the instruments can be used to collect data from a large representative sample of students. These data can then be used to construct a described hierarchical scale of student well-being against which student well-being can be measured, reported and monitored.

6.4.1 Construction of an empirically based described scale of student well-being

Student data are used to construct a described hierarchical scale, or framework, of student well-being as defined by the measurement model. The individual assessment items (represented as different student behaviours) are first scaled, based on empirical data, according to the amount of well-being that they represent. Substantive generalisations can then be made about the behavioural manifestations of different levels of well-being across the aspects. These generalisations become the descriptions of how different levels of student well-being appear in terms of effective student function in the school context. This scale forms the substantive and empirical framework for understanding, measuring and supporting student well-being in schools.

6.4.2 Reporting and monitoring student well-being

Student well-being data can then be reported to relevant stakeholders. Individual point estimates of student well-being can be generated and described against the framework. Detailed individual profiles of student well-being across the different aspects can also be generated. The individual detail from student data can also be aggregated to provide collective well-being profiles of classes, schools, cohorts, populations or population sub-groups. Systematic measurement and reporting can then be conducted to support the ongoing monitoring of student well-being in schools.

6.5 Using measurement data to support student well-being

The overarching implicit purpose of this report is to contribute to the support of student well-being in Australian schools. It is anticipated that through the development of a consistently applicable, properly articulated operational definition of student well-being, school communities and educational systems will better be able to understand and act to support student well-being. It is also anticipated that through the development of a detailed, valid and reliable measurement of student well-being, school communities and educational systems will be better equipped to objectively measure and respond to the well-being demands of their students.

The best use of the data obtained from the measurement instrument proposed in this report is as an agent for remediation and change in schools. The instrument provides opportunity for schools and systems to develop detailed understandings of the well-being profiles of their students. From these detailed profiles, schools and educational systems can make informed judgements about the well-being strengths and needs of their student populations and sub-populations. This can then inform the selection and application of the best systems, programs and pedagogies to support the ongoing well-being of students in Australian schools.

6.6 Recommendations

- I. A minimum of three measurement instruments of student well-being should be developed. One instrument should be developed for use in the junior primary years (Years P-4), one for the middle years (Years 5-8) and one for the senior years (Years 9-12).
- II. The different measurement instruments specific to the different levels of schooling should contain scenarios and behaviours that are congruent with students of that level. The different measurement instruments should also be linked through the use of common assessment items that are applicable to adjacent levels.
- III. Consideration should be given to the construction of additional measurement instruments linked by common assessment items to the core instruments. Such instruments could, for example, be designed for use with pre-school and Indigenous Australian students.
- IV. The measurement instruments should be trial tested in a sample of schools. The information from the trial testing should then be used to:
 - iv. review and refine the survey implementation process;
 - v. validate the substantive and measurement properties of the assessment items;
 - vi. validate the measurement model of student well-being.
- V. The refined measurement instruments can then be used to collect student well-being data from a large representative sample of schools. These data should then be used to construct a described hierarchical scale of student well-being against which student well-being can be measured, reported and monitored.

References

- Adams, T. B., & Benzer, J. R. (2000). Conceptualisation and Measurement of the Spiritual and Psychological Dimensions of Wellness in a College Population. *Journal of American College Health, 48*(4), 165-174.
- Ainley, J., & Ainley, M. (1999). School environments and student social development. In M. American Educational Research Association (Ed.).
- Ainley, J., Batten, M., Collins, C., & Withers, G. (1998). *Schools and the social development of young Australians*. Melbourne: ACER Press.
- Alberti, E. T., & Witryol, S. L. (1994). The relationship between curiosity and cognitive ability in third- and fifth-grade children. *Journal of Genetic Psychology, 155*, 129-145.
- Ardell, D. (1982). *Fourteen Days to a Wellness Lifestyle*. San Francisco: Whatever Publishing.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review, 84*, 191-215.
- Bandura, A. (1986). *Social Foundations of Thought and Action*. Englewood Cliffs: Prentice Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.

References

- Battistich, V., Solomon, D., & Watson, M. S. (1997). Caring school communities. *Educational Psychologist, 32*(Summer 1997), 137-151.
- Beckett, L. (2000). Education, health and welfare : issues for social justice. *Australian Educational Researcher, 27*(3), 131-142.
- Beckett, M., & Pebley, A. R. (2002). *Ethnicity, Language and Economic Well-Being in Rural Guatemala*: RAND.
- Blanksby, B. A., & Whipp, P. (2004). Healthy mind in a healthy body : engaging young people in physical activity through school health and physical education, (*College year book / Australian College of Educators ; 2004*).
- Bond, L., Butler, H., Glover, S., Godfrey, C., & Patton, G. (1999). *The Gatehouse project : what do students' perceptions of school tell us about our methods of reform?*
- Bornstein, M. H., Davidson, L., Keyes, C. L. M., & Moore, K. A. (2003). *Well-Being Positive Development Across the Life Course*. Mahwah: Lawrence, Erlbaum Associates.
- Bouffard-Bouchard, T. (1990). Influences of self-efficacy on performance in a cognitive task. *Journal of Social Psychology, 130*, 353-363.
- Brettschneider, W. (2000). Physical activity and sport involvement in young people : benefits and risks for the individual and the community. *Educare News*.
- Bridges, L. J. (2003a). Autonomy as an Element of Developmental Well-Being. In M. H. Bornstein, L. D. Davidson, C. L. M. Keyes & K. A. Moore (Eds.), *Well-Being Positive Development Across The Life Course* (pp. 167-175). Mahwah: New Jersey: Lawrence Erlbaum and Associates.
- Bridges, L. J. (2003b). Coping as an Element of Developmental Wellbeing. In M. H. Bornstein, L. D. Davidson, C. L. M. Keyes & K. A. Moore (Eds.), *Well-Being Positive Development Across the Life Course*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Cahill-Solis, T. L., & Witryol, S. L. (1994). Children's exploratory play preferences for four levels of novelty in toy construction. *Genetic, Social and General Psychology Monographs, 120*(393-480).
- Carr-Gregg, M. (2000a). Feeling connected. *EQ Australia*(3), 34-36.
- Carr-Gregg, M. (2000b). The risky business of being young. *AQ: Journal of Contemporary Analysis, 72*(1), 23-24.
- Carr-Gregg, M. (2000c). *Student health and well-being*. Paper presented at the In 'World-class curriculum 2000 : Curriculum Corporation seventh national conference : conference papers' pages 32-34. Carlton South Vic : Curriculum Corporation (Australia) 2000.
- Chirkov, V., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating Autonomy From Individualism and Independence: A Self-Determination Theory Perspective on Internalization of Cultural Orientations and Well-Being. *Journal of Personality and Social Psychology, 84*(1), 97-110.
- Corbin, C. L., R. (1997). *Concepts of Fitness and Wellness: With Laboratories*. Madison, WI.: Brown and Benchmark Publishers.
- Cunningham, E. G., Brandon, C. M., & Frydenberg, E. (1999). Building resilience in early adolescence through a universal school- based preventive program. *Australian Journal of Guidance and Counselling*.
- Davis, K. H. (1972). Illiteracy in physical education. *The Secondary Teacher, August*.
- Diener, E., Eunkook, M., Suh, R. E., Smith, L., & Smith, H. (1999). Subjective Well-Being: Three Decades of Progress. *Psychological Bulletin, 125*(2), 276-302.

References

- Diener, E., Lucas, R. E., & Oishi, S. (2002). Subjective well-being: The science of happiness and life satisfaction. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of Positive Psychology*. New York: Oxford University Press.
- Diener, E., Sapyta, J. J., & Suh, E. (1998). Subjective wellbeing is essential to wellbeing. *Psychological Inquiry*, 9, 33-37.
- Duan, C., & Hill, C. E. (1996). The Current State of Empathy Research. *Journal of Counseling Psychology*, 43(3), 261-274.
- Dunn, H. L. (1961). *High Level Wellness*. Arlington: Beatty.
- Ewart, C. G., Jorgensen, R. S., Suchday, S., Chen, S., & Matthews, K. (2002). Measuring Stress Resilience and Coping in Vulnerable Youth: The Social Competence Interview. *Psychological Assessment*, 14(3), 339-352.
- Finn, J. (1993). *School Engagement and Students at Risk* (No. 065-000005956). Washington DC: National Center for Education Studies.
- Frey, K. S., & Ruble, D. N. (1985). What children say when the teacher is not around: Conflicting goals in the social comparison and performance assessment in the classroom. *Journal of Personality and Social Psychology*, 48, 550-562.
- Fuller, A. (2000). Bungy jumping through the ups and downs of life. *AQ: Journal of Contemporary Analysis*, 72(1), 25-27.
- Fuller, A. (2001). A blueprint for the social competencies in children and adolescents, *Health Education Australia*.
- Gladstein, G. A. (1983). Understanding Empathy: Integrating Counseling Developmental, and Social Psychology Perspectives. *Journal of Counseling Psychology*, 30(4), 467-482.
- Glover, S., Burns, J., Butler, H., & Patton, G. (1998). School Environments and the Emotional Wellbeing of Young People. *Family Matters*, 49, 11-16.
- Goodenow, C. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools*, 30, 79-90.
- Graziano, W. G., Jensen-Campbell, L. A., & Finch, J. F. (1997). The self as a mediator between personality and adjustment. *Journal of Personality and Social Psychology*, 15, 233-260.
- Harter, S. (1982). The perceived competence scale for children. *Child Development*, 49, 788-799.
- Harter, S. (1999). *The construction of the self: A developmental perspective*. New York: Guilford Press.
- Hattie, J. A., Myers, J. E., & Sweeney, T. J. (2004). A Factor Structure of Wellness: Theory, Assessment, Analysis and Practice. *Journal of Counseling & Development*, 82(Summer), 354-364.
- Hauser, R. M. (1994). Measuring Socioeconomic Status in Studies of Child Development. *Child Development*, 65, 1541-1545.
- Heatheron, T. F., & Polivy, J. (1991). Development and validation for a scale for measuring state self-esteem. *Journal of Personality and Social Psychology*, 60, 895-910.
- Heatheron, T. F., & Wyland, C. L. (2003). Assessing Self-Esteem. In S. J. Lopez & C. R. Snyder (Eds.), *Positive Psychological Assessment*. Washington: American Psychological Association.
- Hettler, W. (1984). Wellness: Encouraging a lifetime pursuit of excellence. *Health Values: Achieving High Level Wellness*, 8, 13-17.

References

- Higgins, A., Powe, C., & Kohlbers, L. (1984). The relationship of moral atmosphere to judgements of responsibility. In W. M. Kurtines, & Gewirtz, J.L. (Ed.), *Morality, moral behavior, and moral development* (pp. 74-106). New York: Wiley.
- Hill, P. C., Pargament, K. I., Hood, R. W. J., McCullough, M. E., & Swyers, J. P. (2000). Conceptualising religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behaviour*, 30, 51-77.
- Hinds, W. C. (1983). *Personal paradigm shift: A lifestyle intervention approach to health care management*. East Lansing: Michigan State University.
- Huebner, E. S. (1994). Preliminary development and validation of a multidimensional life satisfaction scale for children. *Psychological Assessment*, 6(2), 149-158.
- Jennings, K. D., & Dietz, L. J. (2003). Mastery Motivation and Goal Persistence in Young Children. In M. H. Bornstein, L. D. Davidson, C. L. M. Keyes & K. A. Moore (Eds.), *Well-Being Positive Development Across the Life Course*. Mahwah: Lawrence Erlbaum and Associates.
- Keyes, C. L. M. (1998). Social Well-being. *Social Psychology Quarterly*, 61(2), 121-140.
- Koestner, R., Gingras, I., Abutaa, R., Losier, G. F., DiDio, L., & Gagne, M. (1999). To follow expert advice when making a decision: An examination of reactive versus reflective autonomy. *Journal of Personality*, 67, 851-872.
- Lazarus, R. S., & Folkman, S. (1984). *Stress appraisal and coping*. New York: Springer.
- Leary, H. (2000). How to enhance school culture, student achievement and psychological well-being. *Education Horizons*.
- Lee, R. M., & Robbins, S. B. (1998). The relationship between social connectedness and anxiety, self-esteem, and social identity. *Journal of Counseling Psychology*, 45(3), 338-345.
- Lent, R. W. (2004). Toward a Unifying Theoretical and Practical Perspective on Well-Being and Psychosocial Research. *Journal of Counseling Psychology*, 51(4), 482-509.
- Lent, R. W., Brown, S. D., & Larkin, K. C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. *Journal of Counseling Psychology*, 31, 356-362.
- Linnakyla, P. (1996). Quality of School Life in the Finnish Comprehensive School: a comparative view. *Scandinavian Journal of Educational Research*, 40(1), 69-85.
- Litman, J. A., & Jimerson, T. L. (2004). The measurement of curiosity as a feeling of deprivation. *Journal of Personality Assessment*, 82(2), 147-157.
- Lowdon, B., Davis, K., Dickie, B., & Ferguson, P. A. (1995). *Wellness*. Malvern Vic: Deakin University Press.
- Luepker, R. V., Perry, C. L., McKinlay, S. M., Nader, P. R., Parcel, G. S., & Stone, E. J. (1996). Outcomes of field trial to improve children's dietary patterns and physical activity. The Child and Adolescent Trial for Cardiovascular Health. CATCH collaborative group. *Journal of the American Medical Association*, 275(768-776).
- Marks, G. N., & Fleming, N. (1999). Influences and consequences of well-being among Australian young people : 1980 - 1995. *Social Indicators Research*.
- Marks, H. (2000). Student Engagement in Instructional Activity: Patterns in the Elementary, Middle and High School Years. *American Educational Research Journal*, 37(1), 153-184.

- McConaghy, C. (2000). *Rethinking Indigenous Education Culturalism, Colonialism and the Politics of Knowing*. Flaxton: Post Pressed.
- MCEETYA. (1999). *The Adelaide Declaration on National Goals of Schooling in the Twenty-first Century*. Melbourne: Ministerial Council on Education, Employment Training and Youth Affairs.
- McGaw, B., Piper, K., Banks, D., & Evans, B. (1992). *Making Schools More Effective*. Hawthorn: The Australian Council for Educational Research.
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14, 6-23.
- McMillan, J. H., Henry, G. T., Crosby, D., & Dickey, K. (1995). Measuring Socioeconomic Status at the School Level. *Educational Measurement: Issues and Practice*, 14(1), 15-21,25.
- Mok, M. M. C., & Flynn, M. (2002). Establishing Longitudinal Factorial Construct Validity of the Quality of School Life Scale for Secondary Students. *Journal of Applied Measurement*, 3(4), 400-420.
- Mooij. (1999). Promoting prosocial pupil behaviour: 2-Secondary school intervention and pupil effects. *British Journal of Educational Psychology*, 69(4), 479-504.
- Myers, J. E., Sweeney, T. J., & Witmar, J. M. (1998). *The Wellness Evaluation of Lifestyle*. Greensboro: Authors.
- National Wellness Institute. (1983). *Lifestyle Assessment Questionnaire*. Stevens Point: University of Wisconsin-Stevens Point Institute for Lifestyle Improvement.
- Nelson, B. (2004). Why it takes two to tango : a whole-of-government approach to education and health, (*College year book / Australian College of Educators ; 2004*).
- O'Brien. (2003). Measuring Career Self-Efficacy: Promoting Confidence and Happiness at Work. In S. J. Lopez & C. R. Snyder (Eds.), *Positive Psychological Assessment A handbook of models and measures*. Washington DC: American Psychological Association.
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66, 543-578.
- Palombi. (1992). Psychometric Properties of Wellness Instruments. *Journal of Counseling & Development*, 71(November/December), 221-225.
- Pollard, E. L., & Davidson, L. D. (2001). *Foundations of Child Well-being*. Unpublished manuscript, Paris.
- Pollard, E. L., & Lee, P. D. (2003). Child Well-being: A Systematic Review of the Literature. *Social Indicators Research*, 61(1), 59-78.
- Rickwood, D., Boyle, R., Spears, B., & Scott, C. (2002). The expanding school agenda, *Directions in Education*.
- Roberts, P. (2002). Teaching social competency : the next step in enhancing student wellbeing, *Teacher Learning Network*.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ.: Princeton University Press.
- Ryan, R. M., & Deci, E. L. (2000). Self determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, 55(68-78).
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudemonic well-being. *Annual Review of Psychology*, 52(141-166).
- Ryan, R. M., & Travis, J. W. (1988). *The Wellness Workbook*. Berkeley, California: Ten Speed Press.

References

- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological wellbeing. *Journal of Personality and Social Psychology*, 57, 1069-1081.
- Ryff, C. D. (1995). Psychological well-being in adult life. *Journal of Personality and Social Psychology*, 57(1069-1081).
- Ryff, C. D., & Keyes, C. L. M. (1995). The Structure of Well-Being Revisited. *Journal of Personality and Social Psychology*, 69(4), 719-727.
- Ryff, C. D., & Singer, B. (1996). Psychological Well-Being: Meaning, Measurement, and Implications for Psychotherapy Research. *Psychother Psychosom*, 65, 14-23.
- Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, 9(1-28).
- Ryff, C. D., & Singer, B. (2002). From social structure to biology: Integrative science in pursuit of health and well-being. In C. R. Snyder & G. R. Lopez (Eds.), *Handbook of Positive Psychology*. New York: Oxford University Press.
- Sandler, I. N., Wolchik, S. A., MacKinnon, D., Ayres, T. S., & Roosa, M. W. (1997). *Handbook of Children's Coping. Linking Theory and Intervention*. New York: Plenum.
- Schwarzer, R., & Knoll, N. (2003). Positive Coping: Mastering Demands and Searching for Meaning. In S. J. Lopez & C. R. Snyder (Eds.), *Positive Psychological Assessment A Handbook of Models and Measures*. Washington: DC: American Psychological Association.
- Short, K. (1996). *Material and Financial Hardship and Alternative Poverty Measures*. Paper presented at the 163rd Annual Meeting of the American Statistical Association, San Francisco.
- Smith, D. C. (2003). Problem Solving as an Element of Developmental Well-Being. In M. H. Bornstein, L. D. Davidson, C. L. M. Keyes & K. A. Moore (Eds.), *Well-Being Positive Development Across the Life Course*. Mahawah: Lawrence Erlbaum Associates.
- Solomon, D., Watson, M., Battistich, V., Schaps, E., & Delucchi, K. (1992). Creating a caring community: Educational practices that promote children's prosocial development. In F. K. Oser, Dick, A., & Patry, J.-L. (Ed.), *Effective and responsible teaching: The new synthesis* (pp. 383-396). San Francisco: Jossey-Bass.
- Tasmania. (2000). Paper presented at the In 'World-class curriculum 2000 : Curriculum Corporation seventh national conference : conference papers' pages 91-98. Carlton South Vic : Curriculum Corporation (Australia) 2000.
- Travis, J. W. (1981). *The Wellness Inventory*. Mill Valley: Wellness Associates.
- Tsang, J.-A., & McCullough, M. E. (2003). Measuring Religious Constructs: A Hierarchical Approach to Construct Organisation and Scale Selection. In G. R. Lopez & C. R. Snyder (Eds.), *Positive Psychological Assessment A Handbook of Models and Measures*. Washington DC: American Psychological Association.
- Victoria. Dept of, E., & Training. (2002). *Social competence : a whole school approach to linking learning and wellbeing* (No. 0759402957). Melbourne: Social Competencies Unit, Dept of Education and Training.
- Warner, M. J. (1984). Wellness Promotion in Higher Education. *NASPA Journal*, 21(4), 32-38.
- Weisner, T. S. (1998). Human development, child wellbeing, and the cultural project of development [Review]. *New Directions for Child Development*, 81, 69-85.

References

- Wentworth, N., & Witryol, S. L. (2003). Curiosity, Exploration and Novelty Seeking. In M. H. Bornstein, L. D. Davidson, C. L. M. Keyes & K. A. Moore (Eds.), *Well-Being Positive Development Across the Life Course*. Mahwah: Lawrence Erlbaum and Associates.
- Whatman, S. (2000). Youth wellness and Torres Strait Islander girls : challenges facing teachers in the Torres Strait. *ACHPER Healthy Lifestyles Journal*, 47(3/4), 5-9.
- WHO. (1946). Constitution of the World Health Organisation. In W. H. Organisation (Ed.).
- WHOQOL, G. (1998a). Development of the World Health Organisation WHOQOL-BREF Quality of Life Assessment. *Psychological Medicine*, 28(551-558).
- WHOQOL, G. (1998b). The World Health Organisation Quality of Life Assessment (WHOQOL): Position Paper from the World Health Organisation. *Social Science and Medicine*, 41(1403-1409).
- Willard, L. A. (1993). Identifying and Measuring Desirable Student Social Outcomes. *The Alberta Journal of Educational Research*, 39(2), 245-256.
- Williams, T., & Batten, M. (1981). *The Quality of School Life*. Hawthorn: The Australian Council for Educational Research.
- Witmer, J. M., & Sweeney, T. J. (1998). Toward wellness: The goal of counseling. In T. J. Sweeney (Ed.), *Adlerian counseling: A practitioner's approach* (pp. 43-99). Philadelphia: Accelerated Development: Taylor & Francis Group.
- Wyn, J., Cahill, H., Holdsworth, R., Rowling, L., & Carson, S. (2000). Mindmatters, a whole-school approach to promoting mental health and wellbeing. *Youth Suicide Prevention Bulletin*.
- Zaff, J. F., & Hair, E. C. (2003). Positive Development of the Self: Self-Concept, Self Esteem and Identity. In M. H. Bornstein, L. D. Davidson, C. L. M. Keyes & K. A. Moore (Eds.), *Well-Being Positive Development Across the Life Course*. Mahwah: Lawrence Erlbaum Associates.
- Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal*, 29, 663-676.