Submission to the Productivity Commission Inquiry on the National Education Evidence Base

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The purpose of this submission is to highlight the need for evidence and data on the association between health and a wide range of developmental outcomes in children and young people, including both cognitive and non-cognitive outcomes that are critical for success and engagement in adulthood.

In this submission, we address questions posed in the *Issues Paper on the objective of a national education evidence base*, what kinds of data are needed, and the characteristics of data that should be collected.

Our submission proposes that a national education evidence base needs to include comprehensive data on student health and health behaviours. These data should be reported by students themselves, linked to data on their educational outcomes, and needs to be comparable to similar data collected in other OECD countries. The submission proposes that failure to collect internationally comparable data on student health and health behaviours (including indicators of physical and mental health) represents a serious gap in knowledge regarding factors associated with development of cognitive and non-cognitive skills. Moreover, the lack of internationally comparable data in this space undermines policy aspirations to learn from best international practice.

The authors of this submission have a considerable track record in delivering evidence relating to student health and well-being for use by policy makers. In addition they have specific expertise on issues relating to student health and wellbeing, student outcomes, and collection of large scale representative data from students themselves, as well and from administrative sources, on these topics. Brooks is principal investigator in the English Health Behaviour in School Aged Children survey (www.hbscengland.com). Redmond is project leader of the Australian Child Wellbeing Project (www.australianchildwellbeing.com.au) (Redmond, Skattebol, Saunders *et al.*, 2016).

Question: Do you agree that the objective of a national education evidence base should be to improve education outcomes? Are there other objectives that should be included?

The Issues Paper notes that the Melbourne Declaration on the Aims of Education aims to enable young Australians to become successful learners, confident and creative individuals, and active and informed citizens. This suggests the need to assess young people's development towards a broad range of cognitive, non-cognitive and ethical goals, and the purpose of a National Education Evidence Base should be to provide information that facilitates this assessment. This would involve both outcomes measures (for example in the space of formal learning, creativity and citizenship) and inputs to achieve improvements in these outcomes (cognitive and non-cognitive development, health, and family, community and environmental factors that are shown to be associated with these outcomes).

Question: What education outcomes do you see as relevant? For example, outcomes in traditional academic domains (such as literacy and numeracy), outcomes in non-cognitive domains (such as communication and interpersonal skills).

It is now well recognised that both cognitive and non-cognitive outcomes are critical to children's skill formation and their later labour market creativity (Heckman, Stixrud and Urzua, 2006). While there is currently considerable debate as how best to conceptualise and measure non-cognitive outcomes among populations (Hamilton and Redmond, 2010), it is generally agreed that it is important for children's attainment and well-being to acquire a wide range of social and emotional skills. (Brooks 2014). There is strong evidence that enabling young people to acquire social and emotional skills forms a virtuous circle reinforcing attainment and achievement which in turn aids development and feeds into improved life chances.

Question: What data are needed?
• data on education outcomes (for example, student performance data, destination data and data from developmental assessments)

Collection of these data at both national and international levels is well advanced, with programs such as PIRLS, TIMSS and PISA. These are used to compare the efficacy of education systems internationally, and have had a considerable influence on education policy globally.

• data on student characteristics sourced from within the education system (for example, data on non-cognitive skills — such as social skills, persistence, creativity, and self-control)

There is a considerable literature on personal characteristics, such as self-efficacy, that influence academic outcomes (Zimmerman, 2000). Data on these characteristics are needed, and should be linked to both cognitive and non-cognitive outcomes, and characteristics that are shown to influence these outcomes. Both PISA and PIRLS/TIMSS collect some internationally comparable data from students on personal characteristics relating to modes of study and motivation. However, there is a gap in the Australian educational database on information relating to social skills that can be compared across countries.

• data on external determinants (for example, cultural background, language and socioeconomic status)

PISA and PIRLS/TIMSS collect some internationally comparable data from students on external determinants of cognitive and non-cognitive outcomes. However, there are some serious gaps in these data sources. For example, a wide range of family characteristics has been shown to be associated with educational engagement, including for example, disability or mental illness in a family member, or caring responsibilities that students undertake (Becker, 2007; Cass, Smith, Hill *et al.*, 2009). Recent research shows that these issues impact on a large percentage of students (Redmond *et al.*, 2016).

• other data from outside the education system (for example, health records or social services data).

While it is possible to link health and social service use records to other data for individual students, it is also important to ask students themselves about their health status and their use of services. This is important from a rights perspective, but also because they (especially

school aged students) are likely to be the most knowledgeable informants on a wide range of issues impacting on their lives (Ben-Arieh, 2008). Of considerable importance is the association between health and both cognitive and non-cognitive outcomes. Poor physical and emotional health in adolescence, which can in turn be associated with experience of issues such as bullying, can have a highly detrimental effect on overall life chances, impacting on educational achievement and attainment of life goals, as well as restricting social and emotional development (Brooks, 2014). There is a serious deficit in internationally comparable information in Australia on student health. This is seen for example in the UNICEF Report Cards series on children's wellbeing in rich countries, were Australia is often excluded from the analysis due to lack of data (see for example Unicef, 2007, 2013).

We propose that internationally comparable data on student physical and mental health can be used for both *descriptive* and *correlational* research. That is, these data can be used to directly compare student health and its associations with cognitive and non-cognitive outcomes across countries, and examine factors that mediate this relationship, for example issues relating to the home environment. As PISA studies have shown (Oecd, 2011), international comparison facilitates comparison of systems and how they impact on student development. Adding broader elements of health and family characteristics to international comparison would allow a fuller appreciation of how ecological factors at both family and societal levels can influence student outcomes and how interventions in some countries might be more effective than those in other countries (Bronfenbrenner and Morris, 1998). Moreover, as PISA has shown in the space of educational outcomes, it is expected that over time, these data would facilitate analysis of trends that would allow fuller investigation of the efficacy of policy initiatives to improve both health and educational outcomes (Inchley, Currie, Young *et al.*, 2016).

• *What data should be collected nationally?*

The purpose of this submission is therefore to propose that internationally comparable data on student health, wellbeing and family and personal characteristics is needed in order to map out the full range of influences on student cognitive and non-cognitive outcomes that are amenable to policy action. If the aim of education in Australia is to enable young Australians to become successful learners, confident and creative individuals, and active and informed citizens, then policy in Australia needs to better understand the broad range of factors at societal and family levels that influence these outcomes.

One example of a long-standing international program studying young people's health and it's social and economic correlates, is the Health Behaviour in School-aged Children study (HBSC) (www.hbsc.org), which is a unique cross-national research survey of the health behaviours and health of adolescents (Currie, Zanotti, Morgan *et al.*, 2012; Inchley *et al.*, 2016). Initiated in 1982 and adopted by the World Health Organization as a collaborative study, HBSC is the longest-running international study that focuses on the health behaviour and social context of young people. The HBSC study has conducted nationally representative surveys with students aged 11, 13 and 15 years in up to 40 rich countries every four years. These surveys have been extensively used to provide cross-nationally comparable data on a range of health, behavioural and social indicators on adolescent school children. This survey also covers key emerging determinants and allows for new risks and protective factors to be monitored and understood, for example the impact of social media or sleep on well-being and attainment.

While the HBSC was originally European and North American based, - the study has increasing global reach and there are currently an increasing number of international

projects who linked into the HBSC study, including the Australian Child Well-Being Project, which carried out a large nationally representative survey of students in school years 4, 6 and 8 in 2014 (Redmond *et al.*, 2016). In addition, the Victorian Student Health and Wellbeing Survey (VSHAWS), conducted by the Victorian Department of Education and Training in 2014 and again this year contains large elements of the HBSC questionnaire. However these are not fully part of the HBSC study and do not include all items including many of the new issues examined by the HBSC network that appear to be increasingly influential in determining the health, well-being and educational achievement of young people. There is considerable interest in more countries participating in HBSC, including a number in the Asia-Pacific and South-East Asian regions (for example Taiwan, Hong Kong, Japan and China). To date, most countries have not explicitly linked HBSC data to data on student performance. However, there is growing interest in developing these kinds of linkages, and it would be possible in the Australian context to use probabilistic data matching to link individual student NAPLAN results, for example, to their survey responses.

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