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MIDDLE YEARS EDUCATION

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EDITORIAL:

The leftover years

JOHN GRAHAM

THIS EDITION OF *Professional Voice* contains our third and final instalment of the education lifecycle series. Having started at the end with post-compulsory education and moved back to the beginning for our early years edition, the theme of our Summer 2009 journal is the middle years of schooling. Our chosen sequence parallels the order in which each of these phases of schooling was addressed by the Government and Department of Education in Victoria. A concentration on post-compulsory education in the late 1980s led to the development of the VCE. In the mid 1990s the focus shifted to a series of early years initiatives designed to improve student achievement through enhanced literacy outcomes.

This left the in-between part of schooling, which became known as the "middle years". Over the past decade or so, the department set in motion various research, development and evaluation projects to improve student learning in the middle years. The revised P-10 Curriculum and Standards Framework (CSF II) in 2000 included a new focus on "stages of schooling". It defined the "middle years" of schooling as Year Levels 5-8, with Year Levels 9-10 being described as the "later years".

The rationale for allocating these names to these specific school year levels was paper-thin and seemed as much to do with the way schools are organised as with a definable distinction between the needs and interests of students or the nature of the curriculum at these different "stages".

In May 2003 the then-named Department of Education and Training set out its middle years policy in a paper entitled "A Strategy for Reforming the Middle Years in Victorian State Schools 2003-2007". It defined the middle years as Year Levels 5-9. The paper contained a series of actions and strategies to "reform" curriculum, pedagogy, assessment, school organisation and community partnerships. More concretely for schools, it funded four middle years initiatives to improve literacy, address school attendance concerns, lift retention rates, introduce new student engagement strategies, provide intervention support for those falling behind and establish primary-secondary clusters of schools to promote shared innovation.

The Government's *Blueprint for Government Schools*, launched in November 2003, while not having a section specifically on the middle years, introduced proposals for a new "staged" curriculum (VELS) to supersede the CSF, and a set of principles for teaching and learning (POLT) largely derived from the department's Middle Years Pedagogy Research and Development Project. VELS continued to divide the stages of schooling between Year Levels 5-8 and Year Levels 9-10 but sensibly dropped the CSF labels. Years 5-8 were now subtitled "building breadth and depth" and 9-10 "developing pathways".

In 2008, both nationally and in Victoria, the term "middle years" came back into favour. Victoria's new *Blueprint for Education and Early Childhood Development* identifies three different phases in a "birth-to-adulthood learning and development system". The second of these phases is called "middle years development" and abandons the previous school year level definitions in favour of a human age range. The new focus is on learners and their learning development rather than the school organisation used to facilitate this process. By defining the middle years as ages 8-16 the new Blueprint expands the reach of this phase, to as low as Year Level 3 at one end and up to Year Level 11 at the other.

At a national level, the *Melbourne Declaration on Educational Goals for Young Australians*, launched in December 2008 by all Australian education ministers, identifies "enhancing middle years development" as one of eight national areas of action. While eschewing a specific definition of "middle years" (it's hard enough trying to get a common national starting age), the declaration sets out the areas where enhancement is needed — risk of disengagement from learning, learning activities and learning environments specifically meeting the needs of middle years students and improving transition from primary to secondary schools.

In the draft "companion action plan", the ministers outline a range of actions they agree to carry out over the period 2009-12 to meet student needs in the middle years. These proposals include: providing opportunities for students to "negotiate" their learning, the use of innovative learning technologies, providing programs to foster both student and teacher motivation and skills, ensuring a positive school culture

which will promote well-being and resilience and providing support for the personal circumstances of at risk students.

The shifting focus on the middle years, the definitional opacity and the continued search for what makes a difference to student learning achievement are illustrative of the broader debate/discussion about this phase of learning and development. For example, definitions of the middle years as an age range have often become entwined with debates about curriculum learning sequences and the nature of middle schooling — year level organisation, separate structures (campuses or schools). Similarly, it is difficult to differentiate strategies specifically designed for the middle years, such as student engagement, from those which should apply at all phases of schooling. There is also much debate about the scope of any middle years reform which may range from new ideas about the curriculum and pedagogy to areas such as student welfare, student grouping and student-teacher relationships.

All of these issues arise in one form or another in the articles in this edition of *PV*. Donna Pendergast defines the middle years as the period between childhood and adolescence which she refers to as "early adolescence". To Pendergast the case for fundamental reforms to schooling in these years has been clearly made:

> *…[T]he motivation for reform in the middle years is driven by an abundance of evidence of alienation and disengagement of young adolescents from learning that lacks relevance, and relies on inappropriate pedagogies and poor assessment strategies.*

The process of reform however, is not easy. It requires rigour and consistency and will take on average 10-12 years to consolidate changes. A significant problem for schools embarking on such significant reform is the lack of research data, particularly arising from the Australian context, about the success or otherwise of middle years reform.

This same concern is central to the article by Ken Rowe and Steve Dinham. After their extensive review of middle schooling literature, they found little research evidence on its effect on student outcomes: "There is a serious paucity of quantitative studies employing strong evidence-based methods."

They contend that most of the support for the positive effects of middle schooling arises from qualitative studies and falls into the category of "advocacy". As a consequence, Rowe and Dinham believe that the link between the escalation of attitudinal, behavioural and social problems in the middle years and "traditional schooling" has not been established. This means that there is insufficient evidence to conclude that different organisational, curriculum, assessment and pedagogical approaches will ameliorate these problems.

Erica Frydenberg describes the middle years, which she defines as 10-15 years of age, as a time of "maximum risk and opportunity". Young people in this age group are exposed to risky behaviours with unhealthy consequences but at the same time have the opportunity to develop life skills which will enhance their well-being.

Frydenberg and her research colleagues have identified a series of "coping skills" which they believe should be developed before the transition from the middle years to later adolescence.

Research has further established a close relationship between coping, wellbeing and school connectedness. Good school programs designed to develop these skills have a set of common strategies which not only help students but have a positive spill-over effect on the coping strategies of their teachers.

John Smyth and Peter McInerney identify the disjunction between the conservative "schools are failing" campaign which condemns school programs which emphasise the social dimensions of learning and the importance of student-centred approaches, and what their research reveals about the needs of young people in the middle years of schooling. For example, students place positive teacher/student relationships at the pinnacle of the factors influencing their attitudes to school. Official policy on the other hand gives scant recognition to this issue.

Smyth and McInerney produce "an enabling set of learning conditions" for all young people, especially those from disadvantaged or urban backgrounds. They believe that the 12 conditions they outline place the interests of adolescent students back squarely in the centre of the educational frame.

Joel Roache notes the widely-reported rise in student misbehaviour among middle years students, particularly boys and particularly in secondary schools. His research (with Ramon Lewis) investigated the effects of negative teacher behaviour on secondary school students in Years 7-10. They found that student misbehaviour rises in response to aggressive teacher behaviour and falls when teachers use recognition and rewards for appropriate behaviour.

Roache and Lewis identified a "vicious circle" operating by the end of Year 7 whereby teachers react more aggressively to perceived increases in student misbehaviour, which leads to an actual increase in misbehaviour, which leads to a greater use of aggressive techniques and so on. The research project concluded that:

> *Teachers may not be in a position to control or ameliorate changes in adolescent life external to their classrooms, but they are in a position to affect the lives of their students through their selection of classroom management and discipline techniques.*

Chris Matthews argues that a number of key principles underlying mathematics and science education alienate Indigenous students. Concepts such as "technological progress" and "objectivity" can be seen as devaluing the knowledge and culture of Indigenous societies. Matthews proposes the development of new pedagogy for mathematics, centred on the early and middle years, which supports and maintains a positive identity for Indigenous students.

This pedagogy would illuminate the cultural bias within mathematics to improve the way students relate to the discipline and allow them to gain a deeper understanding of what mathematics is and how it is used. It would also utilise the latent capacity

for creativity within this field of study so that the social and cultural background of students would positively contribute to their learning.

David Zyngier sees the need to challenge current policy approaches to schooling, pedagogy and learning because they create, rather than address, division and disadvantage. He believes that some schools are already doing this by their willingness to explore new curriculum and pedagogical approaches. Zyngier uses the school program known as ruMAD? (are you making a difference?) to illustrate the possibilities of re-engaging students with their learning and schools with their local communities.

The final section of *Professional Voice* is our interview with a prominent educationist. This time Peter Mortimore discusses the impact of student population testing and school league tables. He warns us about following the UK down this slippery slope where the illusion of "improvement" masks a transfer of effort from learning to accountability.

The Success of Middle Years Initiatives: Some important considerations

DONNA PENDERGAST

THE MIDDLE YEARS have not been a high priority of education systems in Australia. Efforts have instead focussed on the early years, particularly related to foundational literacy and numeracy; and the senior years, with a focus on post-compulsory and vocational education.

This is partly because "early adolescence" has only emerged as a category delineated from childhood and adolescence in the past 15 or so years. This lack of focus on early adolescent education has been at considerable cost for teaching and learning effectiveness and innovation in the middle years. Indeed, the motivation for reform in the middle years is driven by an abundance of evidence of alienation and disengagement of young adolescents from learning that lacks relevance, and relies on inappropriate pedagogies and poor assessment strategies. The inevitable flow-on effect of disengagement from learning is underachievement, ultimately leading to dips in educational attainment, and sometimes even declines in levels of prior learning, as well as a lack of interest in school, the increased chance of developing inappropriate behaviour and other undesirable social changes, the culmination of such effects being an increased probability that individual and collective potential is not reached. This ultimately affects the potential for young people to become active and contributing

members of the knowledge economy, and of all aspects defining human capital in our society.

The Middle Years of Schooling Association (MYSA), the Australia-wide peak body dedicated exclusively to the education, development and growth of young adolescents, recently released the position paper *Middle Schooling: People, Practices and Places* which defines middle schooling as "an intentional approach to teaching and learning that is responsive and appropriate to the full range of needs, interests and achievements of middle years students in formal and informal schooling contexts" (MYSA, 2008:1). The middle years are described as from around age 10 to 15, spanning the years from childhood to adolescence. The position paper also specifies three elements necessary for middle schooling:

1. **Clear philosophy relevant to the context.**
2. **Comprehensive range of signature practices** to engage young adolescents in relevant, meaningful and challenging learning, along with organisational initiatives to facilitate their implementation, such as:
    - Higher order thinking strategies
    - Integrated and disciplinary curricula that are negotiated, relevant and challenging
    - Heterogeneous and flexible student groupings
    - Co-operative learning and collaborative teaching
    - Small learning communities that provide students with sustained individual attention in a safe and healthy school environment
    - Emphasis on strong teacher–student relationships through extended contact with a small number of teachers and a consistent student cohort
    - Authentic and reflective assessment with high expectations
    - Democratic governance and shared leadership
    - Parental and community involvement in student learning.
3. **Evidence-based approach with clearly articulated outcomes,** such as:
    - Developing current and lifelong learning attributes
    - Enhanced academic outcomes
    - Creating a love of learning.

This is a useful framework at last providing a consistent message about middle schooling and a potential platform to guide the determination of the "success" of reform in this area. The position paper draws on the work of Pendergast et al (2005) to note that middle schooling implementation typically involves three phases: initiation, development and consolidation. The elements of middle schooling should be increasingly evident as the reform is implemented over time.

The first phase lasts one to two years and typically includes the following core change variables: school vision and visioning processes; student transitions and transitioning procedures; connectedness of student learning to the world outside the school; teacher teaming; innovative leadership.

The second phase lasts two to five years and shows attention to: improved alignment of curriculum, pedagogy and assessment systems; enhanced pedagogies, espe-

cially the provision of greater intellectual challenge; sustainable innovation; linking school culture change with innovative structures; professional learning communities, with teachers as learners; evidence-based policy development processes.

The final stage requires a further five to 10 years and achieves the introduction of changes to address: changing social and economic conditions demanding a broader skill set; learner- and learning-focused programs; student engagement in learning; meeting greater diversity in adolescent needs and capacities.

At best then, a fast-track trajectory takes eight years to achieve the stage of consolidation in the middle years, but this is not a typical reform pathway, with most taking longer, with 10-12 years typical. There are two points to be made here: (1) There are many elements of middle years reform; and (2) It takes time.

With respect to the elements of middle years reform, many have argued the need for a comprehensive approach. For instance, "Middle schooling practices are interdependent. In other words, practices depend upon one another for success" (DET 2005:50); "It is increasingly recognised that for reform to have any cogency and impact on the educational experience of students and the workplace conditions of teachers, it requires the articulation of all key aspects rather than isolated change" (Pendergast 2005:5); and, "Implementing sustainable reform in the middle years is asking schools and teachers to change many of the long accepted practices as they relate to school organisation, pedagogy, and curriculum" (Taylor 2001:9). De Jong and Chadbourne (2007) convincingly argue that there needs to be a critical mass of features of middle schooling — there is a need to go the "whole hog". They refer to a colleague who argues it in this way: if the recipe for a cake contains 10 ingredients and the chef chooses to use only five of them, then no one should be surprised if, when cooked, the cake collapses into a pile of crumbs. It is generally agreed then that for reform to be effective requires the articulation of all key aspects rather than isolated change.

With respect to time, it has been up to states and territories and to sectors to determine their approach and timing of reform in the middle years. Some initiatives are very recent while others have been in place over a considerably longer period. For instance, the Northern Territory Government announced a three-year plan (2006-8) to implement middle years in government schools across the territory. It is being directed by *The Framework for the Principles and Policies for the Middle Years in the Northern Territory* (DEET, 2006) and is considered to be "one of the most significant educational reforms undertaken in the Territory" (DEET, 2006:np). The Queensland Government launched the *See the Future: The middle phase of learning state school action plan* in 2003 in response to the Ministerial Advisory Committee for Educational Reform (MACER) report *The Middle Phase of Learning* (Queensland Government, 2003). The action plan sets the direction, clarifies expectations and accountabilities, and commits systemic support for reforms in every Queensland state school. It requires the alignment of curriculum, pedagogy and assessment to bring greater consistency and rigour to middle year classrooms.

In Victoria, all sectors have been actively implementing middle years and middle

schooling innovations with a strong research culture and evidence based reform since the late 1990s. The Middle Years Pedagogy Research and Development (MYPRAD) project was instrumental in this approach. MYPRAD is a strategy for planning and implementing change in the middle years of schooling. During 2003, materials were developed and trialled to support teachers to reflect on their classroom practice, develop their professional learning teams and promote whole school change. Following the successful trial of MYPRAD materials in nine clusters during 2003, MYPRAD was made available to all Schools for Innovation and Excellence clusters from 2004. It could not be expected then that in Victoria enough time has elapsed for the majority of schools to have achieved a consolidation phase and hence to consider the "success" of middle years reform.

So, the question of the success of middle years initiatives at this moment in time is somewhat tricky. Firstly, it is unlikely that enough time has elapsed to accept that most schools have achieved a level of consolidation in the reform of their middle years, so any measurement of success will need to be interpreted as a point in a journey. Second, in order to determine the success of middle years reform, it is necessary to identify schools and systems where comprehensive reform incorporating the range of elements has taken place, rather than piecemeal innovations. Thirdly, there is the question of what measures of success are useful and for whom are they useful — a discussion beyond the scope of this brief paper. Fourth, success must be considered within the context in which the middle years initiative has taken place. A recently-released special report, *The Status of Programs in Florida Middle Schools* (George, 2008-9), offers some insights into successful large-scale organisational implementation of reforms such as middle years education. Three aspects are regarded as essential for success: clarity of mission; authentic commitment; and skilful execution. In the Florida scenario, it is reported that at a systemic level there was "critical insufficiency in each of these three essential areas" (George, 2008-9:9), inevitably impacting on the measurable "success" outcomes.

When considering success in the Australian context, there is a paucity of research that makes a clear connection between success factors such as student learning outcomes and teacher satisfaction with comprehensive middle schooling innovation where consolidation has been achieved. For instance, in a study conducted on behalf of the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) to investigate what practices, processes, strategies and structures best promote lifelong learning and the development of lifelong learners in the middle years of schooling context, of 25 schools around the nation that were recognised for their innovative work in middle schooling and lifelong learning, only one was determined as having entered the consolidation phase of middle years innovation (Pendergast et al, 2005:8). A larger scale study in Queensland, expected to be released in 2009, promises to offer greater insights. There are also pockets of research being conducted in clusters and in individual schools around Australia, many providing promising glimpses of the success of their initiatives.

What is needed is a comprehensive investigation taking into consideration the ele-

ments and timeline for innovation. At the same time, the success of relevant systemic/organisational implementation of middle years reform in terms of the three aspects — clarity, commitment and execution — must provide a balance to these findings. Only then can the success of middle schooling be gauged with some degree of confidence.

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Fantasy, Fashion and Fact in Middle Schooling: A critique

KENNETH J. ROWE AND STEPHEN DINHAM

SINCE THE MID-1960S, there has been a much greater focus on effective schools, both primary and secondary, and on school change and improvement. However, while the primary and upper secondary years have received the bulk of attention from researchers and policy makers, the middle years have until recently been described as "forgotten", and a "black hole". The middle years have been problematised as a critical period when young people experience substantial physical and emotional change which prepares them for adulthood. During this time, some students disengage or are alienated from learning, and growth in academic attainment can plateau or even fall. There are concerns over literacy and numeracy achievement as well as concerns over failure to engage with, and continue studies in subjects such as mathematics and science in the senior secondary years and beyond.

These are also the years where attitudinal, behavioural and social problems can escalate, and absenteeism, suspension and expulsion from school are most common, especially for boys. It is a period when matters such as body image and sexual orientation can become critical issues for some. There is an important principle underpinning middle schooling that these phenomena are attributable, at least in part, to "traditional schooling", and can be ameliorated by different organisational, curriculum, assessment and pedagogical approaches.

It is important to note, however, that it is unwise to over-generalise about young people during their middle years, or indeed to generalise about the different phases of schooling. While some young people during their middle years of schooling may experience powerlessness, social estrangement, meaninglessness and "normlessness" (ACT DET, 2005:8), many will not. While some may find the transition from primary to high school difficult, many will be ready for and will relish this change. Whereas some may benefit from an extended period of primary-like education, others will not.

Nevertheless, since the mid-1980s, middle schooling approaches and the establishment of middle schools have been considered key educational reform initiatives in English-speaking countries, including Australia, New Zealand, the United Kingdom and the USA, although it needs to be noted there are numerous models and approaches to middle school organisation. Middle schools have been seen by many as a panacea for the problems of upper primary-lower secondary schooling and adolescence in general. Because of interest in the area, the published literature on middle schooling is voluminous, and includes papers, articles, government-commissioned studies and reports, books, curriculum documents and dissertations that are numbered in their hundreds of thousands. Moreover, professional associations devoted to the advocacy of middle years schooling are well known and active (eg, the Australian Middle Years of Schooling Association, Inc. **www.mysa.org.au**; the New Zealand Association of Intermediate and Middle Schooling, **www.nzaims.co.nz**; the UK National Middle Schools Forum, **www.middleschools.org.uk**; and the USA National Middle School Association, **www.nmsa.org** — to cite just a few).

Despite the large volume of published work in this area, strong evidence-based research into schooling during the transitional years known as middle schooling is less than adequate in policy terms. Nonetheless, while middle schooling might be relatively under-researched, there is no shortage of strong views on the subject, both pro and con. Thus, the available literature advocating positive student outcomes from middle schooling approaches and middle schools requires careful examination and critique, which is a key purpose of the review upon which this article is based.

The present article is drawn from an original report prepared by the Australian Council for Educational Research (ACER) under a contract with the New Zealand Ministry of Education (Dinham & Rowe, 2007), undertaken for the purposes of informing policy and practice relating to middle schooling in New Zealand. As stipulated by the New Zealand Ministry of Education, the key purpose of the report was to conduct:

> *… a critical examination and analysis of the literature, to assess what we know about the impact of teaching and learning during the middle school years (years 7 to 10) on student engagement, achievement and attitudes to learning. The results from this literature review will complement the series of case studies the Ministry of Education will be undertaking looking at innovative and effective curriculum and teaching approaches linked to student outcomes in different middle schooling contexts across the system.*

OVERVIEW OF MAJOR FINDINGS OF THE REVIEW

As noted, in contrast to the voluminous and predominately qualitative nature of the literature on middle schooling, there is a serious paucity of quantitative studies employing strong evidence-based methods that have investigated the relative effects of various forms of middle/non-middle schooling, thus constituting a major limitation of the present review. The concern is that writings from advocates for middle schooling tend to be little more than aspirational, frequently bordering on rhetoric and ideology.

Indeed, there have been persistent concerns from some quarters as to whether middle schools actually deliver in terms of improved student achievement and engagement. The widespread adoption of standardised testing and other accountability measures has cast doubt on the efficacy of middle schools in the USA. In this context, Yecke (2005:1) defines middle schooling somewhat disparagingly as "an approach to educating children in the middle grades (usually grades 5-8), popularised in the latter half of the 20th century, that contributed to a precipitous decline in academic achievement among American early adolescents".

Responses to the issues of middle schooling have ranged from the adoption of single strategies or interventions to totally integrated approaches, although the latter is more challenging and less common. Whilst data on student achievement and phenomena such as suspension and absenteeism are fairly readily available, linking these outcomes to matters such as curriculum, pedagogy, assessment and school organisation is more difficult.

One of the issues with attempting to measure the outcome of any intervention is that it is difficult to distinguish the effect of that initiative from the many activities that schools will be undertaking in the middle years at any time. For example, measuring and quarantining the effect of an initiative intended to improve boys' literacy implemented in Year 7 from the effects of "general" learning and development will be difficult, given that literacy is the basis of all subject areas and that reading and writing occur outside school.

Multiple, overlapping initiatives complicate any attempt at obtaining evidence of effectiveness. A further problem occurs where more than one school is implementing an initiative, often from a centrally determined (systemic) and supported program. In this case, there is frequently a range in program "take up" and thus effect. Some schools will be "early adopters" and will enthusiastically take up and support an initiative, whilst other schools will do only the minimum in supporting and driving the intended change. Thus, in measuring or evaluating the overall outcome of any initiative, there is likely to be a wide range of both adoption and impact.

Another problem with evaluating and measuring the effectiveness of interventions geared towards issues and problems in the middle years is that school staff frequently lack the skills, time and resources to accomplish these tasks. Longitudinal data on student achievement and how these relate to any initiative are also difficult to obtain and measure, with the result that there is often an initial "halo" or "Hawthorne" effect, with judgements of success and failure based largely on teachers' perceptions, rather than on evidence linking interventions to measurable student achievement outcomes.

Teacher professional development is vital in the success of any initiative or intervention. Teachers need time, space and external assistance if a strategy is to have a realistic chance of success. Reluctance of teachers (and schools) to change, poor preparation for and "selling" of the change, together with imposition of extra responsibilities, can all put a brake on the success of new programs and approaches. What many empirical studies have demonstrated is that change management can be as important as the nature of the change itself. There can also be problems with mandated versus voluntary and self-directed change, the latter often having a greater deal of commitment, empowerment and resultant effectiveness (see Dinham, 2008).

WHAT IS THE EVIDENCE?

It has already been noted how the research evidence for middle schooling is patchy, inconclusive and questionable overall. In reviewing the research evidence in favour of middle schooling, the Northern Territory Council of Government School Organisations concluded (2005:3):

- There is little research evidence available in Australia on the effect of middle schooling on student outcomes. Most of the numerous studies published consist of advocacy or focus on student and teacher attitudes rather than actual outcomes for students. Little data has been collected on the effect on student achievement. …
- More research is needed to determine how middle schooling practices might best be implemented in different circumstances.

In the conclusion to our review we noted that despite the large and burgeoning literature claiming positive effects of approaches to middle schooling that focus on the cognitive, developmental, social and emotional needs of adolescents, evidence to substantiate the claims remain elusive. Moreover, there are both substantive and methodological "gaps" in the available research as bases for informing both policy and practice. As a consequence, it is suggested that emphasis is best directed at building evidence-based pedagogical capacity in a school's most valuable resource — its teachers. It is further argued that whereas prevailing adherence to the moribund philosophies of biological and social determinism are foremost among several "barriers" to reform, they are not justified by findings from evidence-based research. For example, Edmonds (1978:33) long ago made the following comment:

> *The belief that family background is the chief cause of the quality of student performance … has the effect of absolving educators of their professional responsibility to be instructionally effective.*

More recently, the summary of findings from evidence-based research for the effects of quality teaching on student outcomes provided by Professor Linda Darling-Hammond at Stanford University is pertinent and requires emphasis:

> *The effect of poor quality teaching on student outcomes is debilitating and cumulative. … The effects of quality teaching on educational outcomes are greater than those that arise from students' backgrounds. … A reliance on curriculum standards and statewide assessment strategies without paying due attention to teacher quality appears to be insufficient to gain the improvements in student outcomes sought. … The quality of teacher education and teaching appear to be more strongly related to student achievement than class sizes, overall spending levels or teacher salaries (Darling-Hammond, 2000:3).*

So what matters most? The imperative of quality teaching and learning provision, supported by the specification and maintenance of teaching standards and ongoing teacher professional learning focused on evidence-based teaching practices that are demonstrably effective in maximising students' engagement, learning outcomes and achievement progress (Dinham, 2008; Dinham, Ingvarson, & Kleinhenz, 2008; Rowe, 2007).

In education, too frequently, too much attention is paid to the *conditions* of teaching — "fiddling around the edges" with matters such as school and class organisation (see Hattie's work, 2007, on effect sizes of interventions in teaching on student achievement). This is compounded by a failure to critically and empirically evaluate fashionable teaching approaches such as "discovery learning", "problem-based learning" and "inquiry-based teaching", which are taken on trust by many educators as being effective when research evidence suggests otherwise (see Mayer, 2004; Kirschner et al, 2006). Middle schools are neither a good thing nor a bad thing, although it should be noted that middle schools are in serious decline in the US and UK, the two "heartlands" of middle schooling.

What is actually done within classrooms and schools is the most important thing, not structure; and quality teaching and quality teachers are central to student achievement. On this, the research literature is powerful and unequivocal (see the work of John Hattie, 2003, 2007, for example).

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The Opportunities that the Middle Years Afford Us:

Enhancing student social and emotional wellbeing and learning

ERICA FRYDENBERG

When I was in primary school I had fun and didn't get stressed about work.

Girl, 14

I get really angry at myself and then break something. … I go to my room and just break something there.

Boy, 15

THE HAPPINESS–SUCCESS LINK exists because not only does success make us happy but happiness engenders success. Positive affect helps us to accumulate resources that lead to wellbeing and is associated with social emotional competence, one important aspect of which is coping.

We know that the early years of schooling are important and we cannot afford to get them wrong. We also know that development continues beyond the early years, across the lifespan, and particularly through adolescence. The latest work by

neuroscientists has highlighted the fact that the adolescent brain continues to develop, and this knowledge provides us with opportunities to provide the input for continued healthy development.

The middle years, generally considered to be the ages of 10-15, are times of maximum risk and opportunity. Risk because young people are exposed to a host of possibilities, both good and bad, such as fitting in with friends who may be involved in healthy behaviours or risky ones with unhealthy consequences. At the same time, adolescence is a time of vitality and enthusiasm when students engage in higher order thinking and when they take charge of their own learning and construct their own meaning for the situations they confront and things that they are taught. It is a period of physical, social and emotional change. It is a period of development in identity, particularly sexual, growth in independence, and awareness of their social environment and the issues surrounding that, and relationships and role models loom in importance. These developments provide us with an opportunity to provide life skills that will enhance the wellbeing of all young people. There is a cost if we fail to utilise these important years.

Schools today are expected to do so much more than teach the requisite skills of numeracy and literacy. We have come to appreciate the importance of social emotional competence which is not only the by-product of a happy and successful school experience but is foundational for doing good for both ourselves and others in the world we inhabit.

The most recent survey of young people conducted by Mission Australia in late 2008 found that young people value family and friendships, physical and mental health and independence. Surveys of young people talk about concern with body image and drugs, both in terms of their own vulnerability and for that of others, family conflict and personal safety, including safety from bullies, particularly in the cyberworld. Additionally we know that young people want to have a voice and be heard. They also want to succeed in their endeavours. Each of these requires social emotional competence in order to achieve success and to maximise physical and mental health to achieve wellbeing.

The importance of social-emotional competence is readily acknowledged as an important element of schooling. There are many ways these skills are enhanced in the school setting, through direct instruction with structured programs or indirectly through school-based activities such as topics covered in English, health, fitness and drama. What we have found most helpful is to identify a language of coping, so we know which coping skills are helpful and not helpful, depending on the situation in which they are utilised. Additionally, our research has established that it is important to develop these core skills before the transition from the middle years to later adolescence is complete, as a form of inoculation or insurance against the challenges that young people encounter in the later years.

Given the very things that young people are concerned about, the middle years of schooling provide an excellent opportunity to motivate them to enhance their coping skills. The strategies that have been empirically identified as being helpful in most

circumstances include problem solving, working hard, staying positive, engaging in physical recreation as well as other forms of relaxation, and utilising the support of others. In contrast, the strategies that are likely to be non-productive include ignoring problems, blaming oneself, keeping problems to oneself, feeling helpless, worrying, and using unhelpful tension-reducing strategies such as eating and sleeping too much. These strategies provide a vocabulary of coping, which then allows us to use the concepts both for research and teaching.

Having identified a nomenclature of coping, we have been able to track young people's coping through the adolescent years, and from longitudinal studies we have identified that there is a downward trend in the use of coping strategies in the middle years; that is, more non-productive strategies are used in the 14-16 year period. This has highlighted the need to introduce young people to coping skills before this dip occurs. The middle years are both an ideal and an essential period for developing the social and emotional resources of young people as a preparation for the challenges ahead.

We can utilise the language of coping to develop social emotional competence either through structured programs such as *The Best of Coping* or through self-paced student learning via a CD-Rom such as *Coping for Success*, or just to meaningfully integrate the language into the curriculum.

We have found that it is important to teach young people both *what to do* and *what not to do* when it comes to coping. However, the latter needs to be done professionally so that adolescents do not feel that they are being preached to. Furthermore when we teach coping skills in a universal setting, that is to a class of young people rather than segregating those whom we feel are needy, we have consistently found that those young people in any class who are most in need of the skills benefit the most.

Overall, young people who are at risk of reduced wellbeing and increased distress need to be brought to a situation where they can confidently have the skills to survive. This can be done by having them develop an awareness of the negative consequences of their reliance on strategies such as accepting one's helplessness, giving up, wishfully thinking, worrying, self blaming, doing nothing, varying eating drinking or sleeping patterns, not telling anyone, trying to ignore the problem, and getting sick.

Whilst use of these strategies is not harmful in all circumstances, there needs to be an awareness of the potential for excessive and inappropriate use. The more such strategies are avoided the greater the likelihood that our young will have a greater sense of wellbeing.

A recent study conducted with middle years students (Year 8) found that there is a close relationship between coping, wellbeing and school connectedness. That is, young people who were using productive coping skills were more likely to have good wellbeing, whilst those who used more non-productive strategies had poorer wellbeing. These relationships were also associated with school connectedness. Whilst it can be readily assumed that young people who are connected to school and engaged in school-related activities are more likely to have a good sense of wellbeing and also be productive copers, there is a likelihood that if we resource young people

with good coping skills they will do better in school and remain more connected. Convincing evidence is emerging from the US that increasing social and emotional competence is likely to enhance learning and educational outcomes in general.

The skills that we teach young people in the social and emotional domain are those that adults also require to succeed in life. They include the core principles of emotional competence. We have found that when a teacher implements a coping skills program and monitors how she changes whilst teaching the program in a classroom, she herself benefits and gains numerous insights into her own coping. Teaching coping then becomes a shared experience with both students and instructors learning about their own coping.

We know a great deal about the best way to promote social and emotional programs like the *Best of Coping* in schools. Firstly, bring teachers and instructors on board who are enthusiastic and willing to teach such a program; secondly, train teachers and instructors prior to program implementation; thirdly, provide support for teachers by professionals such as school psychologists while they implement the program; and fourthly, introduce the program to a whole class, so all students benefit and those needing these skills most are not grouped together or singled out. Regardless, needy students will benefit the most.

We have found that introducing the program for 10 sessions, which is a common format for programs, is not enough. Therefore introducing booster sessions in a different, self-paced format is valuable. In a rural setting across 2007/08[1] we were able to implement coping skills training to young people. The young people at this setting were particularly vulnerable to depression and negative mental health outcomes; coping skills training was provided to promote wellbeing and resilience in dealing with problems. Following involvement in the *Best of Coping* program students at high risk of developing depression showed substantial decreases in their use of unhelpful coping strategies, particularly use of self-blaming. Encouragingly they continued to decrease their reliance on these unhelpful strategies over the subsequent 12-month period. Students then received a booster intervention using the CD-ROM *Coping for Success*. Following this program, students reported significant increases in use of productive coping strategies that involved gaining support and referring to others. The use of the booster program was successful in facilitating increased use of helpful coping responses and enabled students to review and reflect on their coping.

Whilst social-emotional competence is a worthy goal, the teaching of these competencies needs to comply with particular prerequisites so that worthwhile outcomes follow. The middle years provide an important platform from which to do this.

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The System is Not Always Right:

Reclaiming the wasteland of the adolescent years of schooling in Australia

JOHN SMYTH AND PETER MCINERNEY

The biggest problem isn't that students are failing schools … it's that the school is failing the student [although] they don't want to see it that way. The student failed school; the school never fails the student. The system is always right. The system is never wrong.

— Year 8 student

WE SEEM TO have reached a crossroad in middle schooling in Australia. Confronted with falling secondary school completion rates and evidence of widespread disengagement in the adolescent years, most state education systems have endorsed (if inadequately resourced) alternative models of schooling in the middle years. As a result we have witnessed the growth of specialist middle schools and concerted efforts amongst educators to develop a more student-centred pedagogy that:

- Emphasises the importance of student-teacher relationships and the notion of learning communities
- Engages students in negotiating learning that integrates personal, community and social concerns into the curriculum
- Fosters success-oriented learning and alternatives to highly competitive forms of assessment

- Promotes greater collaboration between teachers and students in the learning process.

A CONSERVATIVE ASSAULT

Yet at the very time when teachers are being encouraged to embrace a constructivist view of learning and to enact curriculum that is better attuned to the needs of individual students, they have to contend with the coercive elements of nationally developed policies which seem to be more intent on controlling young people and their teachers than on improving learning. What is being constructed through a concerted conservative assault by the mainstream media, prominent business leaders and conservative politicians is one of failure by young people, their schools and teachers. Ideologues of the right claim that schools — especially middle schools — are failing young people because they lack clear guidelines in terms of curriculum content and standards, overemphasise the social dimensions of learning at the expense of rigorous academic studies, fail to concentrate on the basics of literacy and numeracy, and place too much stress on student-centred approaches to learning.

The solution to this so-called "crisis", if we are to follow conservative critics such as New York Education Department Chancellor Joel Klein, is to define what and how students must learn through an outcomes-based curriculum, enforce strict accountability standards in the form of standardised testing regimes, and place more emphasis on formal, whole-class learning of literacy and numeracy.

Spruiking the benefits of his performance model in Australia — a model which publicly awards schools an overall letter grade of A, B, C, D or F — Klein argues that naming and shaming failing schools will create an environment for improving learning for the most disadvantaged students. His policies, which are underpinned by a business approach to school leadership, have been hailed by federal Education Minister Julia Gillard as an example that Australia should follow. However, analysis of national and state test results from New York City show that there has been no general improvement in average student achievements or reduction in achievement gaps since Klein's reform of the public education system. On the contrary, many of the poorest schools continue to be under funded and overcrowded. This is what parents had to say on the New York Public School Parents Blog (Save Our Schools, 2008):

> *The Department of Education under Joel Klein has been run like a ruthless dictatorship — with no input from parents or educators, and no thought of how the policies he has imposed on our schools have been destructive to our children and their futures. … The only educational philosophy of those running the system is based on trying to improve standardised test scores, no matter how much cheating and test prep that involves.*
>
> — Leonie Haimson

> *The only accomplishment under the Klein administration is the reaffirmation of the fact that we should never have had a non-educator in charge of our public education system. … Principals are now business managers with the title of Chief Executive Officer. They used to be considered instructional leaders, who understood and focused their energy on improving teaching and learning in their schools.*
>
> — Shino Tanikawa

SO WHAT ARE THE ISSUES?

Our research into the issues of school retention and student engagement in Australian schools (Smyth & McInerney, 2007) suggests that bearing down on schools with harsher accountability and testing regimes, and requiring teachers to teach in increasingly meaningless and scripted ways will not improve education for students in disadvantaged circumstances. "Quick fixes" of the kind advocated by Klein are precisely the wrong kind of remedies for alienation, disaffection and disconnectedness, which lie at the heart of the matter.

Interviews with young people and their teachers consistently revealed a major disconnection between the curriculum on offer in contemporary high schools and the lives and experiences of young people. Traditional high schools have not always served adolescents particularly well. Learning is often fragmented into subjects and insulated from the emotional lives of young people. In many instances students don't have the time or opportunity to develop close relationships with teachers and peers. Many feel lost and out of place in large schools where hierarchical arrangements often inhibit student voice. Technologies of exclusion operating through sorting and streaming practices, and inflexible behaviour management policies tend to reinforce the practices of exclusion that are writ large in the lives of many students. One of our young informants summed up the culture of the conventional high school classroom as follows:

> *In a typical lesson you sit there and copy stuff from the board … There's no teacher–student relationship at all where they can come in and work together to achieve a common goal which is the student learning … [There's] a corridor with classrooms, chairs in rows, a teacher and a whiteboard up front which isn't really an area which is going to engage students in learning … There's no individuality in what you need to learn and what is the best way for you to learn it. If you're not capable of sitting there with a pad and a pen and copy and doing what you've been told, then you're not, in their eyes, you're not learning … you're going to fail.*
>
> — Year 8 student

Unfortunately, a significant proportion of students experience schools as alienating and inhospitable institutions. Many socio-economic, individual, cultural and school-related factors, reflecting a quite pronounced deficit thinking, are invoked to explain the "non-inclusive" nature of schools. Although many of these factors lie outside the realm of schools, others are more directly connected to the culture, organisational arrangements and instructional practices in schools, especially high schools.

STEERING SCHOOL REFORM BACK TO STUDENTS

That there has been so little official policy recognition of the centrality of relationships to all aspects of schooling is one of the major mysteries of recent times. Yet the importance of building and sustaining positive teacher/student relationships was constantly affirmed by students in our research as a key factor in their decisions to engage with or reject what the school had to offer. We are attracted to the idea of pedagogically engaged schools as vibrant learning communities where:

- Teachers see it as their role (and are encouraged) to provide strong pedagogical leadership
- Students can be confident that their schooling will equip them with a range of skills and dispositions to pursue a worthwhile life
- Students can understand that a "relevant schooling" is one that acknowledges their needs, but that also necessarily occurs within an agreed set of frameworks and structures
- The aspirations, interests and needs of the majority of students are satisfied, not just those who conform to some narrow norms of society
- Power games are not played out as a way of keeping students in subservient positions
- There is genuine dialogue both within and across the school and its community about where the school is going, who it is working for, how well it is doing, and where and when it needs to refocus and restructure its priorities
- The school has worked out how it is going to deal with external reforms and the tensions these might produce with the school's own vision and what it steadfastly believes to be important
- Students feel comfortable in "speaking out" and are not fearful of being castigated or silenced
- Co-operation is considered more important than competition or possessive individualism
- There is no culture of complacency that says, "We have always done things this way in the past, and they seemed to work"
- There is some attempt to confront the hermetically sealed silos of knowledge called "subject specialisations" that still hold such powerful sway in high schools, in favour of some movement in the direction of thinking about knowledge in integrated, thematic and holistic ways.

ENABLING CONDITIONS FOR LEARNING

Drawing on these insights, it is possible to summarise fairly succinctly an enabling set of learning conditions for all young people, but especially for those from disadvantaged or urban backgrounds:

1. *Students have high levels of ownership of their learning:* The school acknowledges the lives, experiences and aspirations of students, and incorporates their diverse cultures, interests and concerns into the curriculum. Students are encouraged and supported to become resourceful, independent and creative learners as they explore a broad range of productive and fulfilling pathways from school to adult life.

2. *Student voice is actively promoted as part of learning:* Schools are configured in ways that encourage students to be activist critical thinkers of how and what they learn in respect to the communities and societies in which they live. Democratic relationships operate within and outside the classroom and students are routinely engaged in negotiating curriculum with their peers and adult members of the school.

3. *Active dialogue with community about the school and its agenda:* The school recognises that the community comprises many groups, organisations and individuals with a legitimate interest in education and a capacity to advance its educational agenda. The school engages in educative dialogue with parents, students and community groups in developing a shared educational vision and education programs for young people.

4. *The focus is on the educational context within which learning occurs:* There is a continual focus on whether everyone understands the wider economic, political and ideological context in which the school is working, and the forces that enhance or inhibit the school's agenda. The school is actively engaged in counteracting deficit views of its students and their families, and in developing an inclusive curriculum in concert with the community.

5. *Teachers employ connectionist pedagogies:* Teachers engage with the diverse lives, backgrounds and aspirations of their students through pedagogies which connect classroom learning to students' lives and experiences. Teachers recognise that they have a responsibility to provide a challenging and rigorous curriculum that broadens students' horizons.

6. *A socially just curriculum is actively pursued:* The school is able to articulate a socially just and democratic alternative to market-driven and utilitarian approaches to public education. A discourse emphasising critical literacies enables students to explore the possibilities of creating a more just world, through a curriculum which promotes an understanding of inequality and human rights, and encourages local and global action in support of the oppressed.

7. *Culturally relevant forms of learning are negotiated with students:* The school views itself as site for transforming the lives of students, not just preserving the status quo. Failure (or disengagement) is regarded as a failure on the part of the school system (rather than the student), and as an inability of the school to offer a curriculum and pedagogy captivating of all students regardless of their background.

8. *A focus on capacity building and social capital:* The school regards itself as a significant source of the physical, interpersonal, psychic, cultural and symbolic resources, networks and relationships necessary for all students to enjoy a rewarding life beyond school. Rather than isolating itself from the broader community, the school constitutes itself as part of a "public sphere" that contributes to debates about public goods and the future directions of society. The curriculum provides a model of ecologically sustainable and socially just practices for the community at large.

9. *Constructing teachers as critical and reflective practitioners:* The school sustains a culture of debate about teaching and learning. Research precedes school planning and invariably new initiatives are greeted with the question, "How will this benefit our students' learning?" The school sees that it has a responsibility to provide the time, space and resources for all teachers to engage in dialogue with colleagues about their teaching during the course of a school day.

10. *Success-oriented assessment:* The school has a success-oriented culture with an emphasis on achievement for all in the widest possible fields of academic, social, vocational and cultural learning. The school has multiple ways of assessing student achievement, and students have opportunities to negotiate assessment tasks and to present the products of their learning to their peers, care-givers and members of the community.

11. *Distributive leadership:* Leadership exists (and is accessed) according to the location of expertise within the school, and is not necessarily conceived of exclusively in terms of office or formal status. In the interests of student learning, teachers with valued curriculum knowledge and expertise may be accorded "provisional authority" over and above the "assigned authority" roles within a school.

12. *Dialogic decision-making:* Teachers, administrators, parents and students work together as a professional learning community. Decisions are made on the basis of dialogue, debate, research and informed discussion within the school community — not knee-jerk reactions to external authority or some manufactured crisis.

CONCLUSIONS

If there is a crisis in education, its causes have much to do with the failure of schools, governments and societies to challenge inequitable educational policies and practices that contribute to social exclusion, and the escalating school "drop-out" rates and palpable disaffection being felt by minority groups. The real crisis is one of paradigmatic paralysis fed by an impoverishment of political will and imagination capable of listening to and embracing the lives, experiences and aspirations of young people, and the teachers and schools who work with them. We need to reclaim the wasteland of the adolescent years of schooling by placing the interests of students squarely in the centre of the educational frame. Such an emphasis need not deny the importance of high standards, high expectations and accountability but it does mean creating a learning environment which is respectful of young lives.

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The Vicious Circle of Middle Years Classroom Management

JOEL ROACHE

THE ANECDOTAL EVIDENCE for an increase in student misbehaviour amongst middle years students (especially and particularly boys) is evident in almost any staff room. Students of this age are also known to display a concurrent loss of connectedness to their family and schools, which is also no great surprise to their teachers and parents. The reasons for this rise in misbehaviour and loss of connectedness have been studied intensely, with possible influences ranging from the physiological, through the sociological, and to the psychological, but few have looked at what effect teacher behaviour and disciplinary styles have on the behaviour of students at this age.

Lewis [1997, 2005, 2008] has investigated the effects of aggressive teacher behaviour in a range of studies involving the perceptions of students and teachers, in both primary and secondary settings. He has also compared the use of aggressive discipline techniques with techniques based on building positive relationships with students through the use of discussion, hinting, involvement in decision-making, and recognising and rewarding appropriate classroom behaviour. The findings of these studies indicate that secondary students are seen to be more concerned about protecting the learning and safety rights of others than those in primary schools. Moreover,

secondary teachers are more concerned about misbehaviour, are less likely to employ positive techniques, and are more likely to use aggressive techniques, regardless of the number of students who misbehave and their level of concern over behaviour. Most critically, secondary teachers positively reinforce appropriate behaviour significantly less than their primary counterparts, whilst using punishment and aggression more, which seriously undermines their ability to form positive relationships with students built on goodwill.

Ongoing research by Lewis and this author has investigated the effects of negative teacher behaviour on secondary school students in Years 7-10, behaviours such as: yelling angrily at students; using sarcasm or belittling comments; humiliating students; or punishing whole class groups for the infractions of a few. It has found significant links between these forms of aggressive teacher discipline and factors such as: student distraction from work; levels of student misbehaviour; negativity towards teachers and subjects; student perceptions of the justification of teacher disciplinary actions; and the levels of connectedness to their schools. Most significant of the associations were those between yelling in anger and the use of deliberate embarrassment, and students' feelings of negativity towards their teachers and distraction from their work (a factor significantly affected by all the forms of teacher misbehaviour assessed).

INSTRUMENTS, METHODS & RESULTS

Two questionnaires were constructed to survey student perceptions of various disciplinary techniques used by teachers, the factors influenced by these techniques, and student connection to their schools, peers and families. The questionnaires were delivered in the first term of 2007.

Connectedness was assessed using 12 questions addressing issues such as: whether they like their teachers' teaching style; like them or are liked by them; the ways their teachers' attempt to get to know them (by knowing what they are good at, interested in, etc); how important and interesting the subject matter they learn is; and the amount of discussion their teachers undertake to explain the importance of the subject matter. Responses were indicated on the following four-point scale (scored 1-4): *nearly all, most, some* and *hardly any/none*; higher scores indicate lower levels of connection.

The level of student misbehaviour was assessed through the use of two questions: "How often do you misbehave in this teacher's class?" and "How many of the students in your class misbehave in this teacher's lessons?" Each question was assessed using a separate four-point scale (scored 1-4):

- Own misbehaviour: *almost never*, *only a little, sometimes* and *often* [higher scores indicate more misbehaviour]
- Class misbehaviour: *nearly all, many, some* and *hardly any/none* [higher scores indicate less misbehaviour].

The level of student distraction from work as a result of a teacher's disciplinary style was assessed using five questions which addressed issues such as: a student feeling

distracted; put off their work; interruptions in their train of thought; and an inability to get on with, or remain interested in, their work. Two further questions each were set to assess the level of annoyance a student felt towards their teacher and how unjustified a student perceived their teacher's actions to be, addressing issues such as: whether or not a student deserved to be disciplined; and how necessary a teacher's disciplinary actions appeared to be. All three factors were assessed on the same five-point scale [scored 1-5]: *nearly all the time, most of the time, some of the time, hardly ever* and *never* [higher scores indicate lower levels].

A range of correlations were undertaken with results indicating that the level of misbehaviour is unduly affected by the use of aggression by the teacher and responds positively to a teacher using recognition and rewards for appropriate behaviour. This alone would seem to be a compelling argument for teachers remaining calm when trying to control their classes and disciplining individual students, avoiding anger and its by-products of sarcasm, yelling, personal attacks and over-zealous punishment. Moreover, it would support the implementation of a systematic approach to recognising and rewarding students when their behaviour is in accordance with set expectations, with the overall aim of creating an environment where self-discipline is the active ingredient rather than external application of standards through compulsion and imposition [Ingersoll, 1996; Lewis, 1997].

Connectedness was also positively associated with techniques such as discussion and hinting, and negatively associated with aggression, results which once again support the use of these positive disciplinary techniques and add to the weight of evidence against the use of negative techniques involving aggressive teacher behaviour. There were high positive correlations between the level of teacher aggression and both the level of student distraction and annoyance and negative correlations between distraction and discussion and hinting, and the same negative correlations between annoyance and discussion, recognition and hinting.

These positive and negative correlations would seem to further support the functional advantages of using disciplinary styles that incorporate discussion, hinting, and recognition, though no such correlations were found to relate any of these strategies to the perceived level of teacher justification [Lewis *et al*, 2005]. One of the aims of assessing these three factors was to get an indication of the "ripple effect" of teacher discipline, the effect that punishing one student can have on the other students in the class, both in the immediate sense and in respect to the ongoing attitude of students towards their teacher [Kounin, 1970; Lewis, 2008]. The ripple effect would appear to be minimised when a teacher uses positive strategies and exacerbated by the use of aggression when punishing students.

Furthermore, the correlations indicated that if teachers more frequently talk in private with students about the impact their misbehaviour has on others, as well as negotiate better ways for the students to behave, they respond with less annoyance and are less distracted when the teacher "does" classroom management. Increased use of recognition and rewards for good behaviour is associated with less student annoyance when a teacher acts against misbehaviour; and if teachers use hints and

give non-directional descriptions of unacceptable behaviour, students again respond with less annoyance and are less distracted when the teacher "does" classroom management. Crucially, students are more likely to be distracted from their work and to feel more annoyance when a teacher deals with student misbehaviour, if that teacher is more likely to employ aggressive disciplinary techniques.

The results also suggest that forms of aggressive teacher disciplinary behaviour are not only likely to annoy and distract all students in the class, but potentially increase levels of student misbehaviour, creating a vicious circle in which all in the class suffer. Not surprisingly, students in classrooms in which teachers use such aggressive behaviours like their teachers and the subject less, are less likely to comply with behavioural expectations, are more likely to respond negatively to punishments when given, and are not encouraged to feel either personally or collectively responsible for their behaviour and for the behaviour of their peers.

Furthermore, the level of misbehaviour influences a teacher's level of concern regarding discipline and also predicts a greater use of aggressive teacher behaviour, independent of the level of teacher concern. The students who teachers believe misbehave to a greater degree are also seen to have less respect for the rights of others to learn and feel safe. Teachers who feel more concerned about discipline use more aggressive techniques and are more likely to negatively influence their students' level of responsibility. Finally, students of teachers who employ more positive techniques are seen to act more responsibly in that teacher's class, whilst, in stark contrast, the impact of teacher aggression appears to lessen the students' respect for the rights of others.

All of the factors investigated — levels of student connectedness, levels of misbehaviour, and levels of distraction, annoyance and perceived justification — follow a similar pattern in which Years 8 and 9 reveal a negative decline/increase from levels evident in Year 7. In these year levels, student connectedness lessens, misbehaviour levels increase, students are more likely to be distracted from their work, annoyed at their teacher, and see teacher discipline as unjustified. It seems viable to conclude that Year 7 students initially maintain the levels of connectedness and so on developed in primary school, only to have a progressive deterioration from positive states to more negative ones as they move through Year 7 and into Years 8 and 9, with a subsequent positive return as they enter senior school age.

What becomes open to question is where the impetus for this pattern comes from, and, though there are many likely influences involved, it does appear to be "steered" in part through changes in teacher disciplinary behaviour. These changes may or may not be grounded in a reaction to actual alterations in the levels of student misbehaviour, though misbehaviour levels certainly rise in Years 8 and 9. It is clear, though, that increased use of aggressive disciplinary techniques by teachers is a feature of secondary schooling, as is a decreased use of positive techniques such as recognising and rewarding appropriate behaviour, factors which have been shown to actually discourage students from acting responsibly and increase their levels of misbehaviour.

However it develops, the vicious circle is in full effect by the time students leave Year 7; teachers react to perceived increases in misbehaviour with more aggressive disciplinary techniques, which in turn lead to an increase in actual levels of misbehaviour, leading to even greater use of aggressive techniques, and so-on. Simultaneously, students are seen as less responsible for the rights of others and less connected to peers and schools, whilst receiving less positive affirmation and reinforcement of appropriate behaviour, leading to a lowered willingness to act responsibly and encourage peers to do the same, leading in turn to decreased connectedness and decreased willingness to comply with behavioural expectations. Both cycles operate concurrently on Year 7 students, eroding their positive wellbeing at school, their respect for their teachers, and opening them to the need for increased teacher disciplinary action.

Regardless of external influencing factors on the behaviour and performance of middle years students, there is clear evidence for significant levels, in excess of half in some studies, of variation in student outcomes deriving directly from within the classroom environment [Nye, Konstantanopoulos & Hedges 2004, Timperley & Alton-Lee 2008, Cuttance 1998]. With this in mind, it seems obvious that optimising levels of student responsibility, connectedness to peers/teachers/schools, willingness to comply with behavioural expectations, positive attitude towards teachers and subjects, and levels of focus and wellbeing in class, would be a high priority for all educators. The benefits are clear for all of these elements, yet it does not appear to be the case in many classrooms, especially those in the critical middle years of schooling. Teachers may not be in a position to control or ameliorate changes in adolescent life external to their classrooms, but they are in a position to affect the lives of their students through their selection of classroom management and discipline techniques. Consistent use of positive disciplinary techniques based on discussion, hinting, student involvement in decision-making, and recognition and rewards, coupled with a calm demeanour and a willingness to actively engage in building positive relationships of mutual respect, trust and goodwill, will all lead to a more productive and unified classroom learning environment, and eventually to more positive student outcomes.

ACKNOWLEDGEMENTS

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Stories and Symbols:
Maths as storytelling

CHRIS MATTHEWS

IN 2008, I had the great honour of being invited to speak at the World Indigenous Peoples Conference on Education (WIPCE) on the traditional lands of the Kulin Nation. This article is based on the address I was asked to deliver, on a vision for the future with regard to Indigenous education. I focused on my current work in mathematics education. However, before expressing this view I would like to give the reader an understanding of my own educational experiences.

I went to school in Toowoomba, which is a relatively small city approximately 200km west of Brisbane. During my school years (1975–87), I was generally the only Aboriginal student in the class and I experienced racism from both teachers and students. These racist attitudes started in my early primary years and, on reflection, I recognise that it was generally fuelled by extreme ignorance about Indigenous peoples and their cultures. Even though these episodes were spasmodic in nature, experiencing them from a young age left me feeling publicly humiliated and, in the long term, with a very strong sense of "not belonging". As part of this exclusion, I was confronted with stereotypes from peers and educators that did not fit my cultural world view and identity. In essence, my identity was continually challenged from a young age, and left me confused about myself and how I could fit within this so-called modern society.

I would like to express my deepest appreciation for the positive aspects in my life during this period, that is, my family and friends. In particular, my family was a very positive influence, providing the love and support I needed to become happy and successful. My family also developed within me a strong Aboriginal identity and, more importantly, a strong belonging to Minjerribah (Stradbroke Island) and to the Minjerribah community.

Interestingly, this positive sense of self did not help me deal with the stereotypes I was confronted with. In essence, I was dealing with the dominant society's post-colonial constructions of "the Aborigine", one that was mostly in direct conflict with my identity. I learnt quickly to become invisible as an Aboriginal person during my schooling and not to draw additional attention to myself in fear of further humiliation.

MATHS (AND SCIENCE) CURRICULUM

In my view, the mathematics and science curriculum can be an alienating experience for Indigenous students because of the notion of technological progress. The underlying message in this notion is that society is evolving linearly into a more advanced technological society, and other cultures, which have not developed the same type of technologies, are considered primitive, simplistic and less advanced. Consequently, the belief in linear technological advancement has not allowed a place for Indigenous people, and their cultures, within education and, in particular, in science and mathematics. There is little recognition of the scientific achievements of Indigenous Australians even though Indigenous knowledges have been exploited for Western scientific purposes.

Another important feature of mathematics and science is the notion of objectivity which originates from the scientific method and underpins both these disciplines. Objectivity allegedly allows a scientist to observe and measure a particular physical process without interfering with the process; in other words, science transcends the observable world. This leads to the belief of an ultimate "truth" where the "true" process is realised without influence from the observer including the observer's subjectivity. As a consequence, mathematics and science are often perceived as being devoid of culture and its influences, and in doing so generate "real" knowledge. It is evident that both these notions provide a superior position for mathematics and science, which can explicitly and implicitly devalue Indigenous cultures, thereby further alienating Indigenous people from engaging in mathematics and science.

MY EXPERIENCES WITH MATHEMATICS EDUCATION

During my years in primary school, I was not a high achieving student including in mathematics, and was just managing to get through assessment. The turning point in my mathematics education occurred in Year 8 when I started to learn algebra. The moment was like an epiphany where mathematics suddenly seemed easy and made more sense. I was also able to use algebra to put other mathematics content I had learned (or tried to learn) into perspective and gain an appreciation for the structure of mathematics. As my confidence in mathematics increased, my learning accelerated

and I become very good at the subject and achieved a high standard. In retrospect, I also believe that I used the objectivity of mathematics to hide from my social position within the classroom. I did not have to deal with race or culture and had found a path where I could survive and potentially thrive within the system.

After completing a PhD in applied mathematics in 2003, I started to work in mathematics education in collaboration with Professor Tom Cooper and Dr Annette Baturo at Queensland University of Technology. As part of my research, I set myself the challenge of providing a different perspective on mathematics and developing an innovative pedagogy from this perspective that supports and maintains a positive identity for Indigenous students. To achieve this, I had to look for the cultural aspects of mathematics by asking a fundamental question: What is mathematics?

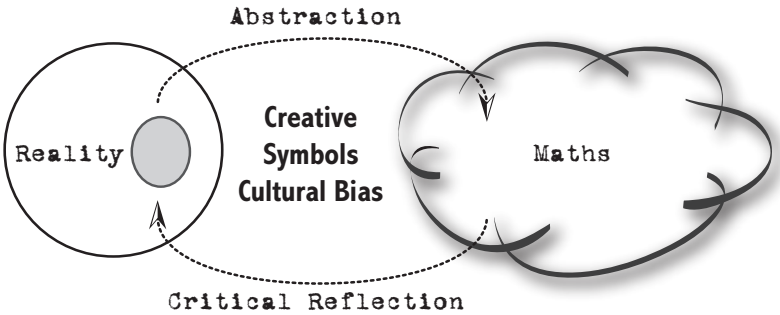

FIGURE 1

Figure 1 encapsulates my view on this fundamental question of the epistemology of mathematics. In this view, mathematics starts from observations in a perceived reality. The observer chooses a particular part of the reality (represented by a grey circle in Figure 1), and then creates an abstract representation of the real-life situation using a range of mathematical symbols, which are put together to form a symbolic language we call mathematics. The observer uses the mathematics in its abstract form to explore particular attributes and behaviours of the real life situation and to communicate these ideas to others. From the mathematics, it is essential that the observer critically reflects on their mathematical representation to ensure that it fits with the observed reality. Consequently, the abstraction and critical reflection processes form an important cycle where mathematics and its knowledge are created, developed and refined. I would argue that most students only experience mathematics in its abstract form (ie, they stay within the cloud in Figure 1) and do not experience and obtain an appreciation for the cycle of abstraction and critical reflection. I believe that developing pedagogy that is centred on this cycle will lead to an authentic mathematical literacy and allow students to achieve at a high standard.

There are three important features to the model in Figure 1 that need to be emphasised when developing effective pedagogy in mathematics. The first is **creativity**, which is particularly evident in the abstraction and critical reflection cycle. It is important to note that this cycle is similar to other artistic pursuits such as dance, music, painting and language as different forms of abstractions. Therefore, we can perceive mathematics as another art form and, in theory, relate it to these other forms of abstractions. In essence, it is possible to develop empowering pedagogy that allows students to be creative and express themselves in the mathematics classroom. This would allow students to learn mathematics from their current knowledge (ie, from the students' social and cultural background), thereby providing agency through creativity and ownership over their learning.

As a product of the abstraction process, **symbols** and their **meanings** are important features of the model since they connect the abstract representation with reality. However, it is common that students do not make these connections easily and view mathematics as just sums with no real meaning. This is further exacerbated for students when they first learn algebra, and letters are suddenly introduced into mathematics without any obvious reason except that we are now learning algebra. Interestingly, focusing on creativity within mathematics, particularly with regard to the abstraction process, will naturally focus on symbols and meanings and assist in understanding the current mathematical symbols, and symbolic language, and their connection to the reality. In addition, this can also lead to the teaching and learning of the underlying structure of mathematics, providing students with a holistic view of mathematics.

The third important feature for developing pedagogy is to recognise **cultural bias** within mathematics. If we consider Figure 1, cultural bias exists in all aspects of the abstraction and critical reflection cycle. The observer expresses their cultural bias in the way they perceive reality and decide on which aspect of reality they wish to focus on. In the abstraction process, the form a symbol takes and the meanings that are attached to this symbol or group of symbols is biased by a cultural perspective. Finally, the critical reflection processes are underpinned by the cultural bias within the abstraction process and the observer's perception of reality. If we have an understanding and appreciation of the cultural bias within mathematics, new innovative pedagogy can be developed that moves beyond some cultural biases so that students can relate to mathematics but also gain a deep understand for the current form of mathematics and how mathematics is used.

MATHS AS STORYTELLING

One pedagogical approach that originates from the model in Figure 1 is Maths as Storytelling (MAST). This approach was developed for a research project, funded by the Australian Research Council, to explore new ways of teaching algebra for students who are underachieving. The approach was trialled in several classrooms (lower primary and middle school years) that had a high proportion of Indigenous students.

The MAST approach focuses on stories and explores how symbols and their meanings are constructed to communicate these stories. At this stage, it is intended that students freely design ways of communicating stories using symbols from their world and/or symbols they have created. We then introduce stories that have deliberate mathematical content. As an example, we get two groups of students at the front of the class and ask the two groups to walk together. We discuss what occurred and ask the students to identify what happen at the start of the story (two groups of students), what action occurred (the two groups joined together) and what happen after the two groups joined (they become one group). We then introduce concrete materials for the subjects of the story (ie, the students) and ask students to create a symbol for *joining* as the action to the story and a symbol for *becoming* since the action (or joining) transformed the two groups into one group.

FIGURE 2.

Figure 2 is an example from a Year 2 student who engaged in the above pedagogy where four students joined two students to give six students. When we asked the student what his symbols meant the student gave the following meanings. The first symbol is a vortex that sucks the two groups together and the cloud gently places them down. From this example, it is evident that students are experiencing mathematics in a creative fashion and using their imagination as they do it. They engage in the abstraction process by exploring stories and creating abstract representations of these stories. Also, certain mathematical language can be reinforced by exploring the structure of the stories and then transforming this language into symbolic representations.

In addition, we allow students to explore algebra by modifying the story (ie, taking one of the concrete materials away) so that the story no longer makes sense. The students are then challenged to correct the story, which leads to understanding the balance and compensation concepts within algebra.

The MAST approach was also trialled in the middle school, which provided a method for understanding more complicated equations. As an example in a Year 8 class, a student asked why equation $2x = 8$ was divided by two to find x. The teacher directed the student to represent the equation in a quasi creative manner with two x's on one side of a line and eight circles on the other. The student was then able to see that dividing both sides by two will give the value of x. The teacher argued that this could not have been done without the student having previously experienced the MAST approach and created novel representations of equations. In addition, students

also expressed a sense of freedom in engaging in creativity activities, shifting the focus away from mathematical symbols to the underlying meaning and structure of mathematics.

The MAST approach has the potential to be an empowering way for students to learn mathematics. It is one outcome of interpreting maths as a cultural activity (Fig. 1). In the future, developing mathematical pedagogy that focuses on creativity and allows the students to contextualise their mathematical learning and enhance students' agency, is my main aim. The pedagogy will also focus on the pattern and structure underlying mathematics and instil high expectations in the students. I believe that this is one of the ways to address disadvantage in mathematics education, particularly for Indigenous students.

Education through Elegant Subversion

DAVID ZYNGIER

> *No arbitrary obstacles should prevent people from achieving those positions for which their talents fit them and which their values lead them to seek. Not birth, nationality, colour, religion, sex, nor any other irrelevant characteristic should determine the opportunities that are open to a person — only his [or her] abilities.*
>
> (Friedman & Friedman, 1980, p132).

AUSTRALIA HAS WITNESSED a growing trend to mass secondary education in the past 50 years — in 1940 only one in 10 students completed 12 years of school. In the 1970s this rose to one in three and then to three in four in the 1990s. There has been a corresponding flow on into higher education with one in four attending university in the 2000s.

Comforting as these high rates might be, they rest not on higher aspirations but on a collapsing full-time labour market which effectively trapped people in schooling. The expanding education system has resulted in an increase in social inequalities and economic segregation rather than a narrowing (Teese, 2007).

With the election of a new federal Labor government in November 2007 came a proposed "education revolution". The newly-elected Prime Minister:

> *…cannot understand why public institutions such as schools should not be accountable to the community that funds their salaries and their running costs. Right now, we do not have accurate, comprehensive information to allow rigorous analysis of what schools and students are achieving. This must change.*
>
> Kevin Rudd, address to the National Press Club, August 27, 2008.

Once again the very people responsible for the excellent achievements of Australian students (in comparison to other OECD countries) are being blamed for their supposed failures.

But some schools are doing amazing things, especially for children from culturally, linguistically and economically diverse (CLED) communities. Broadly speaking the strategies fall into three areas: new pedagogies and curricula; social support and wellbeing; and community participation. It is the new pedagogies and curricula which I believe hold the greatest potential for what I have called the elegant subversion of the current dominant paradigm of division and disadvantage.

Most of the programs described reflect the important point that there is no single recipe for program development. This article briefly reviews a school program that is *elegantly subversive* in that it is achieving the required results by doing school differently especially for children from *all* communities. In doing so I highlight the achievements of one particular project (of many) that has had enormous impact on the participants and their communities.

RUMAD? ARE YOU MAKING A DIFFERENCE?

Over 1000 Australian schools have participated in ruMAD? since its inception in 2001 as a pilot project of the Education Foundation. Currently over 230 schools are participating. ruMAD? has the following aims:

- The active participation of young people in the community through action research projects
- Providing young people with opportunities for engaging, independent, student-centred learning
- Modelling engaging, student-centred learning for teachers
- Enabling young people to make a difference in their school or community
- Supporting student leadership
- Creating the conditions for identifying core values
- Building social competencies such as self-esteem and confidence
- Building the skills and knowledge to solve real world problems.

The program is an inquiry-based pedagogical framework that (a) accords with state and federal policy emphasis on values education; and (b) encourages, educates and empowers young people to enact social change — to make a difference within their

school and community. Predicated on the belief that everyone is able to improve and help change the communities in which they live, the program provides participants with opportunities for experiential civic engagement.

"JESSIE'S CREEK" SCHOOL: WHITFIELD DISTRICT PRIMARY SCHOOL

Whitfield is an agricultural township in the King River valley 170 km northeast of Melbourne. The primary school has around 20 students from kindergarten to Grade 6.[1]

Jessie's Creek runs through the town and behind the school and was cloaked in a blanket of weeds that had accumulated over the years, aided by the dumping of green waste (weeds, grass clippings, etc) and miscellaneous rubbish. Despite the creek being the town's main water supply there was also a lot of rubbish scattered about; creepers, ivy, blackberry and lucernes covered a creek that looked more like a botanical garden (National Resource Management, 2008).

The students at the primary school took on an ruMAD? project to carry out a biodiversity study of the creek and clean it up. From the outset they have been at the centre of the campaign to save Jessie's Creek, mustering community support by producing brochures, conducting surveys and sending letters to government bodies linked with management of the creek.

After carrying out the biodiversity study, and after only one afternoon of attempting to clean up the creek, the students decided that there must be a better approach. They looked at how they could influence other people and organisations to come on board as partners. Thomas (Grade 6) explains: "We quickly realised hand weeding wasn't going to do the trick, so we used an excavator to remove the big weeds." The students wrote to environmental organisations such as the Wilderness Society and Greening Australia, and to the Rural City of Wangaratta (the local shire) to share their findings. They developed a survey for the local community, produced a brochure to publicise their ideas, and prepared presentations for groups including Landcare, the North East Catchment Management Authority, and the school principals of the Goulburn North East Region.

After the weeding and excavating the locals couldn't believe the difference it made to the appearance of the entire town — they said they hadn't seen the creek for 50 years. The students studied local native vegetation before planting hundreds of trees and shrubs together with a variety of grasses and sedges in flood-prone areas to prevent further erosion.

From their presentations and letters the students attracted official funding totalling more than $40,000.

> *"You have to believe in what you are doing and make a fuss to get things moving. People were surprised that kids could do this stuff."*
>
> Grade 6 girl, Whitfield District PS

Students and teachers from surrounding areas also pitched in with weeding and planting. Many of these schools have now started their own ruMAD? projects.

ruMAD? has at its core the philosophy that students need to be involved in curriculum and pedagogy that:

- Come from the kids' own ideas about what is possible, inspiring enthusiasm among all those involved
- Create real and lasting change by tackling the main causes of the problem
- Acknowledge and build on previous successes, big or small
- Get kids involved in the community to tackle issues of social justice, responsibility, tolerance and cultural diversity
- Create awareness and understanding of the needs of others through personal action
- Allow everyone involved in the project to take greater responsibility for their own lives
- Share the results with others, inspiring them to take further action
- Consider the effects on the environment, society and economy (both positive and negative)
- Help kids to express their views, become critical thinkers and learn how to put problem-solving skills into action to create the world they wish to live in. (Zyngier & Brunner, 2002)

It is values-focused, student-led and at its core starts from student-identified values and visions. The ruMAD? organisation provides schools with curriculum materials and resources that enable students to design, implement and evaluate action projects. Examples include building links between a school and local nursing home; anti-bullying strategies; support for homeless people; support for children with cancer; environmental degradation and restoration projects.

ruMAD? is underpinned by four main educational objectives:

- To engage young people in issues of social justice
- To engage young people with a high level of authenticity
- To promote student-led classrooms, thereby challenging teacher practice
- To create real community change. (Westheimer & Kahne, 2004)

SO WHAT ARE THE POSSIBILITIES OF THE ELEGANT SUBVERSION OF EDUCATIONAL POLICY?

This has demonstrated that the re-examination of education provision in disadvantaged communities can foster the transformative engagement of students in empower-

ing and collaborative experiences that link curriculum, pedagogy and assessment to identity, politics, and social justice. Teachers and schools can become "elegantly subversive" through a strong sense of collective effort built on isolated individual projects.

Student outcomes for CLED children will be successful if NGOs, teachers and academics work together, deconstructing the binary of hands-on versus heads-on learning and teaching. When students do not believe their school experience has much bearing on their future and do not feel accepted by their classmates and teachers (Zyngier, 2007), they gradually become disaffected and withdraw from school life. Some become disruptive.

As evidenced by ruMAD?, an engaging pedagogy should ensure that what teachers and students do is based on what I have termed CORE Pedagogy.

It is when teachers and students respond to each other in pedagogical reciprocity that we truly see whether or not students feel that school is "for them". It is within a "community of learners" where adults and children collaborate in learning activities (Rogoff, Turkanis & Bartlett, 2001) that education can provide a chance that is not illusionary and can be engaging and lead to purposeful, relevant and productive educational outcomes.

Critically, these systems must connect to and engage with the students' cultural knowledge while also affirming the different strengths that knowledge forms bring to classroom pedagogy, if those most at risk are to *find themselves* in schools, so that their knowledges, histories and experiences are validated and accounted for. Such student engagement is an empowering one, developing a sense of entitlement, belonging and identification. Otherwise students are doing time, not doing democracy.

Through pedagogical reciprocity, what the teachers and students do together as part of ruMAD? involves:

- *Connecting* to students' cultural knowledge
- *Ownership* by the students so that they can see themselves represented in the work
- *Responding* to students' lived experiences and, actively and consciously, critically commenting on that experience
- *Empowering* students with a belief that what they do will make a difference to their lives.

Many programs designed to *re-engage students* reinforce the status quo, reproducing a pedagogy of poverty (Haberman, 1991) within their classrooms, even when this is not their aim. Transformative engagement, as employed by the ruMAD? program, was not pedagogy *for* students or *to* students, but pedagogy *with* the students. However, "participation is a means, not an end … for empowering education" (Shor, 1992, 51).

It is possible, through pedagogical reciprocity, for teachers to reconceive student engagement "where difference is accorded respect and all voices are deemed worthy. [This] can make the classroom a place where students come out of shame … to experience their vulnerability among a community of learners who will dare to hold them up should they falter or fail" (Hooks, 2003, 103).

In order to solve such problems we need to be linking curriculum, pedagogy, assessment to identity, politics, and social justice where teachers take an historical and sociological perspective beyond the classroom and the school — becoming "elegantly subversive" through a strong sense of collective effort that may be built on what otherwise might be considered isolated individual projects. Whether teachers will decide on the path of least resistance and change what they do, or continue to try to change their students, remains to be seen. Elegantly subversive programs like ruMAD? challenge the dominant views that since school works for middle-class students, then working-class students "must deserve the blame" (Howe & Moses, 1999, p39).

ENDNOTES

1 See the website of the National Resource Management department of the Australian federal government for maps and more details **http://www.nrm.gov.au/projects/vic/nev/2006-02.html**

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PETER MORTIMORE

School league tables and testing

INTERVIEW BY JOHN GRAHAM

PETER MORTIMORE IS a former director of the Institute of Education in London and international professor at the University of Southern Denmark. The interview took place by email following his speaking tour of Australia on the subject of high stakes testing and league tables at the invitation of the AEU and a group of Australian Universities.

JG: What are the major concerns about school league tables?

PM: They tend to dominate public discussion about schools. They fuel the development of a market economy of school places yet they are fundamentally flawed since they fail to reflect differences in the intakes to schools.

JG: What have been the effects of school leagues tables in the UK on parental choice of schools?

PM: For many parents, league tables — sponsored by the Government — appear to offer a clear guide to the best schools. Accordingly, they are followed avidly by aspiring parents who wish to do the best for their children. The problem is that where there are more applicants than places, the choice switches from that of parents to that of schools. League tables even influence the price of houses, with properties in the catchment of a highly ranked school attracting a sizeable premium.

JG: What has been the effect on individual school enrolments?

PM: Highly ranked schools are usually swamped with applications. There have been a number of cases of parents giving false addresses in order to gain access to certain schools. Low ranked schools often struggle to achieve sufficient numbers to make them viable. Of course, the situation is affected by the level of provision in a neighbourhood. Some areas have barely enough places overall; others have a surplus. There are also rural parts of England where access to more than one school is prevented by distance or journey time.

JG: What impact have league tables had on the school curriculum?

PM: A recent report from the House of Commons Select Committee[1] that deals with education was extremely critical of the current emphasis on league tables and on the "high stakes testing" which underpins the results. Many of the submissions to the committee drew attention to the practice of "teaching to the test" and the repeated practice sessions that are inevitable in such a system. The Royal Society — the UK's foremost scientific body — was particularly critical, commenting that "aspects of the current assessment system are holding back students' and teachers' performance and creativity".

JG: And on school improvement?

PM: The imposition of a high stakes regime encourages schools to strive for improvement but only in the limited area which is being tested. Teachers feel impelled to act strategically and to devote their energies to doing things which might improve the position of the school in the league table. Accordingly, other aspects — such as developments in behaviour, awareness of citizenship and teaching of the arts — tend to be neglected or accorded second place.

JG: On school collaboration and competition?

PM: Collaboration between schools is not promoted by a system in which schools are treated as businesses which have to compete with their neighbours. Even though the Government has tried to encourage "beacon schools" to share their skills, there is a feeling that good ideas should be contained within the institution rather than being shared with other schools within the community.

JG: What abour equity?

PM: League tables tend to depress equity as teachers are encouraged to focus on students who may help lift the school's rankings. Those who are likely to be borderline candidates in tests are likely to be given the most help. Students who require special help are less likely to be welcomed as they may use more resources — and do less well in the tests, so pulling down the school's scores. Furthermore, it is clear from research undertaken by the OECD in many countries that parents who are socially, economically or culturally advantaged are more adept at making choices[2]. In a system based on league tables, the most desirable school places are bound to be commandeered by such parents, leaving the remainder of less desirable ones for those with less advantage.

JG: Why do you think governments introduce school league tables?

PM: I believe all governments wish to improve their systems of education. Unfortunately, in recent years, many ministers appear to value a crude business model in which strong schools survive and the weak go to the wall. They do not seem to grasp that market rules, which may well be suitable for buying and selling material goods, are intrinsically unsuitable for schooling. Apart from the obvious issue of equity, there is a fundamental flaw in seeking to apply market rules to choice of schools: unlike inanimate objects, children cannot be put into and taken out of schools without incurring damage (as studies of children of service personnel who had to attend numerous schools illustrate). Parents, therefore, often baulk at moving their children more than once unless this is inevitable due, for example, to a change of job location.

JG: How do you respond to the argument of the Australian Federal Government that league tables will make school performance more "transparent"?

PM: League tables appear to offer transparency but do not do so. If every school received an identical intake, with exactly similar proportions of talented learners, average learners and those for whom learning is extremely difficult, then they might offer transparency. In the real world, they offer only an illusion. Furthermore, this illusion can obscure those schools which receive outstanding intakes of students and achieve only moderate results and, at the other extreme, those schools which, having received the most challenging students, achieve beyond any reasonable expectation.

JG: Are some league tables better than others?

PM: Some tables may be less objectionable than others but the concept remains fundamentally flawed. As I noted earlier, the market model does not work for schools. Extra places in the best achieving schools cannot be created by speeding up the

production line. The least achieving schools cannot be closed without harming the most vulnerable students and communities. League tables encourage parents to aspire to the top schools and inevitably disappoint all those who fail to gain places in them: the longer they remain in existence, the greater the proportion of disappointed parents.

JG: What do you think of the notion of "value-added" league tables? Is there a valid way you can do this?

PM: As an early pioneer of this technique, I am enthusiastic about it. I have frequently used it for research projects in the field of school effectiveness[3]. However, I have learned that there is no universally agreed method of creating a value added table. In my experience, schools which feel unjustly treated by the methodology of comparison seek the help of statisticians who, with alternative methods, can draw up tables with different rankings.

JG: What do you think of the idea of having league tables of "like schools" (ie comparing a school with others with a similar student population)?

PM: Like value added methods, this technique is sound in theory but flawed by the difficulty of ensuring that groups of schools are truly made up of "like schools". The smaller the group, the more idiosyncratic factors have powerful distorting impacts.

JG: In New York City, the system the Federal Government is particularly interested in following, schools receive a progress grade based on their performance compared to the previous year. What is your view of this process?

PM: Until the New York system has been in place for a number of years, it is difficult to judge its efficacy. I have serious reservations, however, about the validity of such techniques. Examining yearly progress without sophisticated measures of changes in the intake of schools can prove highly deceptive. I have seen too many schools improve their results by recruiting more advantaged students rather than by changing their teaching or the care they offer their students.

JG: Is there too much (high stakes) testing in English schools?

PM: For the past 20 years, life in English schools has been dominated by high stakes testing. Bethan Marshall (an English academic) has calculated that, on average, each student sits 100 formal tests or examinations[4]. Warwick Mansell — an education journalist — has described the stultifying effects of so much testing[5]. The key problem, in my view, is not the testing as such but its high stakes nature. Testing has a positive part to play in students' learning by providing helpful feedback to students and their teachers. The problem arises because the focus of high stakes testing is not on learning but

accountability.

JG: What are the outcomes of over-testing students?

PM: Despite the best efforts of teachers, a generation of students has been taught that education is mostly about high stakes tests. For those who learn easily — and are good at tests — this represents a wasted opportunity but, for others, it is far more serious. Students may leave school convinced that they are bad learners and carry this view of themselves through their working lives.

JG: What do you see as alternatives to the present testing regime?

PM: For education systems to flourish, testing has to regain its proper role as a tool in teaching and learning. Other ways of pursuing accountability through school evaluations need to be adopted. In my experience, the most effective of these is through a mix of internal and external work. Critical friends — who understand the school environment and can assess its intake — can challenge those who work in an institution far more effectively than any analysis of test results obtained under high stakes conditions.

JG: What do you believe are the best ways to engender school improvement?

PM: The desire for school improvement has to come from teachers. Anything else leads to superficial compliance with government edicts. The challenge, therefore, is how best to empower teachers to innovate and evaluate within their own schools. They will be their harshest critics and their most enthusiastic supporters. This is what professionals, once they know that they are being trusted, can do. If school leaders galvanize their colleagues, parents and the local community into action, I am confident we will see a host of new ways to improve schools.

ENDNOTES:

1 House of Commons, Children, Schools and Families Select Committee. *Testing and Assessment.* Third Report of Session 2007—08.

2 OECD (2007). *No More Failures: ten steps to equity in education.* Paris: OECD

3 Sammons, P, Thomas, S & Mortimore, P (1997). *Forging Links.* London: Paul Chapman Publishing.

4 Marshall, B (2004). Testing, testing, testing. In Wragg, T (ed) *Letters to the Prime Minister.* London: New Vision Group.

5 Mansell, W (2007). *Education by Numbers.* London: Politico's.

NOTES on contributors

STEPHEN DINHAM is research director of the Teaching, Learning and Leadership research program at the Australian Council for Educational Research (ACER). He is also currently a professorial fellow at the University of Melbourne and visiting professorial fellow at the University of Wollongong. Professor Dinham taught in government secondary schools in NSW before entering academia. He has conducted a wide range of research projects in the areas of educational leadership and change, effective pedagogy/quality teaching, student achievement, postgraduate supervision, professional teaching standards, teachers' professional development, middle-level leaders in schools, and teacher satisfaction, motivation and health. He has an extensive publication record.

ERICA FRYDENBERG PhD is a clinical, organisational, counselling and educational psychologist who has practised extensively in Australian education. She is an associate professor in psychology in the University of Melbourne Graduate School of Education where she is a member of the organisational leadership cluster of academics. She is a Fellow of the Australian Psychological Society and a member of the Board. She has authored over 100 academic journal articles and chapters in the field of coping, published psychological instruments to measure coping and developed programs to teach coping skills. Her most recent volume is *Adolescent Coping: Advances in theory, research and applications* (May 2008, Routledge, UK).

JOHN GRAHAM is a research officer at the AEU Victorian branch, with responsibility for researching curriculum and professional developments in education and training. He has written extensively about curriculum change, teachers and teaching as a profession, developments in education at an institutional, state and federal level, and on a range of other matters from funding to organisational review. John has been a teacher in Victorian government secondary schools, a researcher and writer for a national equity program, and a project manager and policy developer for the Department of Education.

CHRIS MATTHEWS is from the Minjerribah (Stradbroke Island) Community in the Quandamooka Nation of Moreton Bay. Dr Matthews completed a PhD in applied mathematics at Griffith University and is currently working on several mathematics education projects in communities throughout Queensland, in particular a collaboration with Dunwich State School, on Minjerribah, funded by the Australian Research Council to explore new ways to teach algebra by taking into account the world view of the students. He co-ordinates the Indigenous Research Network at Griffith University and is a key researcher in the Yumi Deadly Maths Consortium, a collaboration with Queensland University of Technology, which aims to improve mathematics education for Indigenous people.

PETER MORTIMORE is a former director of the Institute of Education in London and international professor at the University of Southern Denmark. He recently undertook a speaking tour of Australia on the subject of high stakes testing and league tables at the invitation of the AEU and a group of Australian Universities.

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DONNA PENDERGAST has been program director of the Middle Schooling programs at the University of Queensland since their inception in 2000. She was recently appointed head of the School of Education and Professional Studies at the Gold Coast campus of Griffith University, where she is associate professor.

JOEL ROACHE is a researcher in the La Trobe University Faculty of Education. He has lectured at both La Trobe and Monash Universities, having taught at a range of secondary schools. Dr Roache is currently in the second year of a longitudinal research project into classroom management, as well as working within teacher training courses and professional development programs. For further information regarding the issues raised in his article, please contact Dr Roache via email at: **j.roache@latrobe.edu.au**.

KEN ROWE was, until his untimely death in February in the Victorian bushfires, the research director of the Learning Processes and Contexts research program at the Australian Council for Educational Research (ACER), and a member of the board of ACER's Psychometrics Institute. Prior to his appointment at ACER, Dr Rowe was principal research fellow and associate professor in the Centre for Applied Educational Research at the University of Melbourne (1993-99). During 2004 and 2005, Ken chaired the National Inquiry into the Teaching of Literacy. Dr Rowe's substantive and methodological research interests included: "authentic" educational and psychological assessment; multilevel, "value-added" performance indicators and benchmarking; teacher and school effectiveness; and differential gender effects of schooling.

JOHN SMYTH is a research professor in education and **PETER MCINERNEY** a research associate in the School of Education, University of Ballarat. The ideas in this paper are based on their recent book Teachers in the Middle: Reclaiming the wasteland of the adolescent years of schooling (Peter Lang, New York, ISBN 978-0-8204-7459-5).

DAVID ZYNGIER is a former secondary teacher and principal and lectures in education at Monash University. His research focuses on teacher pedagogies that engage all students but in particular how these can improve outcomes for at-risk students. He is currently researching teacher beliefs about students from culturally, linguistically and economically diverse (CLED) communities and their understanding of democracy. He is co-director of the Global Doing Democracy Project. If readers are interested in participating or learning more please email David at **david.zyngier@education.monash.edu.au** or call (03) 9904 4230.

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