

# **THE WINSTON CHURCHILL MEMORIAL TRUST OF AUSTRALIA**

Report by Dr Tess Lea, 2005 Churchill Fellow

To examine education policies, funding decisions and teaching practices based on evidence rather than ideology

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Signed: Tess Lea

Dated: 16 June 2006

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## Introduction

This Fellowship enabled me to go to the United States and Montreal, Canada, during the first half of 2006, visiting with leading policy reformers, researchers, practitioners and theorists whose work focuses on improving school education outcomes for the most disadvantaged learners. It was built on the premise that the challenges besetting education in the Northern Territory could benefit from a more systematic analysis of the issues, drawing on international experiences and an emphasis on evidence, not rhetoric.

I have found that the solutions are actually quite simple to name but harder than hard to execute: solving this difficulty should be on the national agenda. There is a great deal known about what should be done to improve life chances for disadvantaged and minority groups, short of transforming the entire economy and its inbuilt layers of social stratification and disadvantage. Implementing what we know and ensuring its long term traction through the vicissitudes of staff turnover, tepid implementation strategies, the addiction to new fads and impatience for fast results, poor comprehension of the skills needed to drive quality in education policy and practice over the long term—these are what we tend to leave to chance and can not be said to know how to do.

Education reform is a highly contested field and the stakes in Anglophone post-industrial countries are arguably greater than ever before. This report summarises my key findings, without being unduly simplistic or naïve about the difficulties involved in this field. Throughout I have tried to be frank and to the point whilst protecting people's privacy where necessary and hopefully without landing the Trust, informants or myself into hot water. A second version is being prepared extracting a more immediate plan of action, with more direct analysis of the practical constraints.

## Acknowledgments

My first thanks go to the Winston Churchill Memorial Trust and the volunteer board members, staff and donors whose efforts uphold such an enabling scheme. Whenever I felt flat from the gruel of living out of a suitcase with dispenser machine food, the inspiration of the Trust, Board Members and a sense of the community of extraordinary fellows helped revive my energy.

Emeritus Professor Ken McKinnon first took my proposal seriously, and refereed it with Peter Plummer and Hal Wooten (AO). Ken established connection with Professor James Kelly, whose patronage, credibility in US education circles and personal generosity opened many valuable doors. Other key connections were established with the help of Tony Clifton, Paul Torzillo and Jeff McMullen. There are many people in north America who responded to the call of this fellowship with resources, additional contacts, personal hospitality, office accommodation and most generously, their hard-pressed time. Here I would like to especially thank Michael de Miranda, Suzanne Wilson, Deborah Loewenberg Ball, David Cohen, David Campbell, Phil Abrami, Susan Fuhrmann, Alan Ruby, Richard Rothstein, Bob Boruch, Dennis Doyle, Kathleen Leos, Tim D'Emilio, Peggy McArdle and Reid Lyon for their valuable inputs and contributions. The financial and collegial support of both my workplaces—Charles Darwin University and the Northern Territory Department of Employment, Education and Training—was also crucial, particularly the role played by Dr Gary Robinson.

But without doubt, my largest debt is to my family, Greg Moo, Daniel and Elise, whose love and support is more important than I can possibly describe here and without whom I simply could not proceed.

# Executive Summary

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## Highlights

- Discovering Prof David Olds, inventor of a sustainable program for supporting abused teenage mothers to greatly improve their own life chances and that of their offspring
- Learning of highly reproducible models for linking research and practice
- Connecting with key theorists of reform that augur mutually beneficial future collaborations, including a serendipitous meeting with education ambassadors from New Zealand, whose responses to the challenge of improving Maori education results at a whole of country level, highlight paths forward for the Northern Territory
- Learning from reform leaders in Detroit and New York whose radical work in high poverty schools is borne of frustration with ineffective state and federal policies and deep system resistance to change
- Learning from the backroom people critical to the new emphasis on evidence in the US, particularly Drs Reid Lyon & Peggy McArdle
- Discovering a dormant US:Australia education alliance that can be vivified with effort.

## Major lessons learnt

- Clear interventions for assisting Indigenous communities from infancy to adulthood can be mapped but implementation requires cross-agency and community coordination at the most seriously intelligent levels.
- Only teachers (and students) can directly improve individual results: every other effort needs to be a focused attempt to mediate, support or amend that primary relationship, near or far. Teacher preparation processes, pre- and post-service, must be made sufficient to the task of preparing teachers for the challenge of teaching highly disadvantaged populations. And intensive efforts are required to give all those involved in running and reforming schools – principals, teachers and the supporting network of community contributors – well informed options for and expertise in driving implementation. Good researchers, principals, teachers, policy makers must be made, not born.
- Achieving this requires building depth in our policy, research and practitioner networks, drawing on wider fields of expertise than education alone. Education needs to be seen as a field that cannot generate answers from a purely internal basis: multidisciplinary expertise is essential. So is courage and perseverance.
- Lack of funding for building a science of education intervention is a major barrier to reform in the Northern Territory. Catastrophic education results need to be viewed with the same concerted attention and financing that health research receives for its comparable policy and delivery challenges.
- Assisting Indigenous advocates and national leaders in their fight to define and shape the debate with quality information is a key area for action.

## Proposals for dissemination and implementation

In addition to directly informing policy and research agendas as opportunities arise, findings are to be disseminated via a program of talks, colloquia, publications, one-on-one meetings with change agents and community leaders, editorials, media talks and the initiation of new projects. A preliminary program is at Appendix One.

A second and more confronting version of this report, distilling a manifesto for action, is also being prepared to promote wider impact and uptake.

# Fellowship Program

## 20<sup>th</sup> –25<sup>th</sup> February, Los Angeles, USA

- Sixth Annual Campbell Collaboration Colloquium (C2). The Campbell Collaboration exists to produce, maintain and disseminate high quality systematic reviews of intervention studies in crime and justice, education, social welfare, and other social and behavioural arenas. These reviews are international in scope and seek to include all relevant - published and unpublished - high quality studies addressing a policy or practice question. I was interested in seeing whether this type of work could be reproduced in the Northern Territory research and policy sectors.

## 26<sup>th</sup> February – 4<sup>th</sup> March, Fort Collins and Denver, Colorado USA

- Research and Development Center for the Advancement of Student Learning, Colorado State University – excellent model for connecting research with practitioners through district and university co-funding of the research centre
- Poudre district school and administration visits organised by Professor Michael de Miranda
- Prevention Research Centre for Family and Child Health, University of Colorado Health Sciences Centre ([www.uchsc.edu/peds/subs/prc/index.htm](http://www.uchsc.edu/peds/subs/prc/index.htm)) with Professor David Olds, pioneer of an intervention whereby low-income, first-time mothers are supported as early as possible in pregnancy, continuing until their children's second birthdays, to improve their health and nutrition during pregnancy, learn effective early parenting skills, and reach key goals like completing school and finding employment.

## 5<sup>th</sup> – 16<sup>th</sup> March, Ann Arbor, Detroit and East Lansing, Michigan, USA

- School of Education, the University of Michigan ([www.soe.umich.edu](http://www.soe.umich.edu)): models for exemplary teacher preparation based on researched methods of skills development; nation's leading education policy research and evaluation inquiries. Connection with Professor David Cohen whose insights into the challenges of driving good policy were profound: expertise includes the relations between policy, instruction and the improvement of teaching, studies of the effects of schooling, various efforts to reform schools and teaching, the evaluation of educational experiments and large-scale intervention programs, and the relations between research and policy.
- Colloquium on Literacy in Adolescence, Uni of Michigan: sharing of information on the issue of redressing literacy failures in secondary settings
- College of Education, Michigan State University, East Lansing: time with graduate students, program leaders, administrators and school officials. Connections with Professor Suzanne Wilson, Center for the Scholarship of Teaching, an expert on driving formal teacher education to create competent teachers willing to stay in the profession, and Professor Bill Schmidt, Co-Director of both the Center for China-US Education Research and the University Policy Center at MSU. Professor Schmidt is an advisor to Congress on America's lag in math and science results internationally and is leading a large scale multi-site approach to educating teachers on methods for progressing all students, whatever their background, through advanced math development. Many challenges are similar for both Australia and USA in this area.
- Meeting and site visits organised by David Campbell, President of the McGregor Fund (see [www.mcgregorfund.org](http://www.mcgregorfund.org)), a philanthropic trust dedicated to betterment projects in education, human services, health care, arts and culture, and public benefit in Michigan and particularly Detroit. An astute observer of educational challenges being faced in America, particularly in inner city schools that concentrate large numbers of students from low income families. Included time with Doug Ross, Superintendent, University Preparatory High School (a charter school determined to have 90% of its students, all drawn from high poverty backgrounds, college viable upon graduation: see [www.uprep.com](http://www.uprep.com)) and site visits to charter schools funded by the Skillman Foundation, a philanthropic trust determined to target and fund success rather than spread its money indiscriminately across disadvantage.

### **17<sup>th</sup>-23<sup>rd</sup> March, Montreal Quebec, Canada**

- Centre for the Study of Learning and Performance, Concordia University (<http://doe.concordia.ca/csfp>): experts in developing web-based and multi-media training materials based on scientific principles of leaning and cognition, targeting children at risk of school failure: major emphasis on technology enabled pedagogy and distance delivery. All programs subject to randomised controlled trials level of evaluation. Also gained a Canadian perspective on US vs. Canadian policy reforms vis-à-vis disadvantaged learners.

### **23<sup>rd</sup> March – 5<sup>th</sup> April, Philadelphia, Pennsylvania, USA (and region)**

- Consortium for Policy Research in Education (UPenn node): CPRE is an alliance of education researchers from the University of Pennsylvania, Harvard, Stanford, Michigan and Wisconsin-Madison ([www.cpre.org](http://www.cpre.org)). Currently, their work focuses on accountability policies, capacity building efforts across different levels of the education sector, methods of allocating resources and compensating teachers, governance changes (e.g. charters and mayoral takeovers) and student incentives. I looked at their establishment, methods for communicating work with education decision makers and stakeholders, a selection of their research findings and how they are able to fund and resource applied and theoretical projects. Through Professor Susan Fuhrmann, now at Columbia University Teacher's College, CPRE are also responsible for several international alliances, including those with the New Zealand Education Ministry. Former ties with Australian education reformers have fallen astray but could be revived if a clear business case could be presented to the US consortium partners.
- Dedicated sessions with
  - Professor Hank Levin, Columbia University Teachers College, New York City
  - Emeritus Professor Jim Kelly at the Asia Society, New York City ([www.asiasociety.org](http://www.asiasociety.org))

### **6<sup>th</sup> – 16<sup>th</sup> April, San Francisco, California, USA**

- American Educational Researchers Association (AERA) Annual Conference
- Dedicated sessions with:
  - Professor Mike Kirst, Professor of Education, Business Administration, Stanford University
  - Richard Rothstein, Economic Policy Institute and visiting lecturer, Columbia University Teachers College.
  - Professor William Schmidt, University Distinguished Professor of Educational Psychology, Michigan State University
- Attended Consortium for Policy Research in Education network event, serendipitously connecting with New Zealand education policy ambassadors who forging alliances with US policy researchers for domestic reform

### **20<sup>th</sup> April – 12<sup>th</sup> May, Washington DC, USA**

- Office space and school site visits hosted by Kathleen Leos, Assistant Deputy Secretary and Director, Office of English Language Acquisition (OELA), Federal Department of Education. OELA is responsible for ensuring children who are "limited English proficient, including immigrant children and youth, attain English proficiency, develop high levels of academic attainment in English, and meet the same challenging State academic content and student academic achievement standards as all children are expected to meet." (<http://www.ed.gov/about/offices/list/oela/index.html>)
- Attended the National Council for Accreditation of Teacher Education (NCATE) college accreditation induction workshop over four days; interviewed Reading First Teacher Education Network ([www.rften.org](http://www.rften.org)) project workers; met with Dr Art Wise, CEO, NCATE
- Participant observer, feedback on longitudinal study of No Child Left Behind, RAND Headquarters

- Participant-observer as *Education Week* ([www.edweek.org](http://www.edweek.org)), was pulled into production, courtesy of Virginia B. Edwards, President, Editorial Projects in Education, a nonprofit, tax-exempt organization whose primary mission is to help raise the level of awareness and understanding among professionals and the public of important issues in American education.
- Dedicated sessions with:
  - Dr David Mendel, Director, Mathematical Sciences Education Board, National Academies of Science
  - Professor Peggy McArdle, National Institute of Child Health and Human Development, National Institutes of Health
  - Professor Reid Lyon, Executive Vice President for Research and Evaluation, Higher Ed Holdings, LLC and Whitney International University Systems
  - Dr Joseph A. Aguerrebere, President and CEO, National Board for Professional Teaching Standards
  - Professor David Francis, University of Houston ([http://www.tlc2.uh.edu/david\\_francis/](http://www.tlc2.uh.edu/david_francis/)) on the results of his longitudinal analysis of bilingual education effects
  - Dr Rachel Tompkins, President, The Rural School and Community Trust (National Office)
  - Professor Jack Jennings, Center on Education Policy – on their independent assessment of No Child Left Behind
  - Professor Robert Slavin, Success for All Foundation
  - Dr Donna Christian and Professor Diane August, Center for Applied Linguistics: National Literacy Panel results
  - Diane Pelavin and Rebecca Herman, What Works Clearinghouse, American Institutes for Research
  - Dr Suzanne Donovan, Director, Strategic Education Research Partnership, National Academies of Science
  - Kate Walsh, President, National Council on Teacher Quality
  - Dane Linn, Director, Education Division, National Governors Association

**13<sup>th</sup>-15<sup>th</sup> May, Return to Darwin, Australia**

# Main Report

## Background

When contacting key reformers in the United States, I explained my Fellowship in the following way:

*The Northern Territory comprises a large land mass (one-sixth of the Australian continent) but has less than two percent of the Australian population, approximately one-third of who are Indigenous. Since colonisation, the bulk (80%) of the non-Indigenous people live in the urban towns of Darwin or Alice Springs whilst conversely, the majority of Aboriginal people live in dispersed remote area communities. The growing Aboriginal population is predicted to become the majority population cohort in north Australian schools over the next decade.*

*Whilst entering a 'demographic gift' period when a maximum proportion of the Indigenous population will be in their prime working years, education outcomes for Aboriginal people in Northern Australia are consistently below minimum literacy and numeracy benchmark levels across all levels of schooling. For instance, while 97% of participating Year 5 non-Indigenous students reached minimum benchmark levels for literacy in 2003, only 27% of participating students classified as Indigenous and remote met this target.*

*While the health consequences, social impediments and economic barriers for school leavers who are unable to read, write or reason mathematically are devastating, national and state policy and school-based attempts to redress this situation have only been partially successful. Among other things, there have been debates about the role of vernacular languages in the curriculum, vacillating on-off support for bilingual programs, calls for more tangible evidence of results (without corresponding clarity about how to achieve these within schools) and a changing history of political interest that sees less regulation for schools as the answer one year and as a problem the next. Good case studies and pilot programs are rarely replicated for mainstream effect, while the national policy and research agenda lacks the clarity required for sound decision-making at the regional level and underplays the unique demographic and geographic challenges of Northern Australia.*

**Challenge:** *We need the best minds devoted to education to help us as we strive to build local expertise in the isolation of the Northern Territory. We believe improvements can be made possible through the sharing of knowledge, networks and support between the public sector, Indigenous, educational, corporate, industry, philanthropic and academic partners. This fellowship seeks to extend and build such a collaborative network to the benefit of disadvantaged learners in northern Australia.....*

On the face of it, North American legislators and theorists have led the way in moving beyond rhetoric to actually link research to policy to funding to practice. A greater network of researchers, theorists, public policy officials and interested community

leaders have invested time and resources to thinking about how to improve education, how to reduce poverty, how to make the most of the nation's rapidly changing human capital in ways that can be reproduced at scale and with measurable outcomes. They have not simply relied on easy-to-think structural remedies (such as reducing class sizes, tweaking staff entitlements, increasing teacher numbers, calling for standardised curriculum and higher expectations, creating more remedial programs, documenting success stories in the hopes of encouraging imitators<sup>1</sup> etc). Or rather, they have *tried* to wean themselves off these common-sensical prescriptions and the equally widespread habit of re-labelling existing practices with new names and announcing it as change.

Under their *No Child Left Behind* policy, for instance, the American federal government is attempting to enshrine adoption of externally-developed research-based comprehensive school reform models within low performing schools. In exchange for federal funding, schools must show plans for meeting federally defined proficiency targets—targets which all schools are expected to meet by 2014, no matter their starting point. Failure to show incremental improvement in closing the gap between a school's current starting point and these targets after two years ushers in a series of interventions. Year One of failing to meet targets sees students (and parents) offered the choice of moving to a higher performing school or using their share of the federal funds their school has been receiving on their behalf to instead purchase what are called 'supplemental' or remedial services from approved providers.

By the third year of failure to show adequate yearly progress ('AYP'), the school itself will be the focus of 'corrective action' and will be asked to detail its reform plans, including replacing staff; accepting more centralised administrative direction over the school; appointing external advisors; restructuring the school or lengthening instructional time by increasing the school year or day. Eventually, should a school that has been identified for corrective action continue to fail, it may be subject to

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1 This desire to document successful case studies as a dissemination tactic is sadly ubiquitous but ignores the fact that people cannot make changes they do not have the means, technical expertise and support structures to sustain. Its ease of suggestion is understandable enough: but what seems so obviously helpful actually lets policy makers and funders off the collective hook of ensuring school reformers are given every assistance they require to break the odds of failure.

closure, contracted to a private provider or turned into a charter school. In addition, all programs that claim to improve student achievement are increasingly challenged to demonstrate effectiveness based on the validation techniques of scientific studies—which means that experimental research has assumed a new pride of place as the gold standard of verification.<sup>2</sup>

### ***An Urgent Challenge***

I know from first hand experience that fighting for a transformation of education services in the little part of the world that is the Northern Territory, with its highly localised concerns and deep internecine divisions, stretched capabilities and overall national and international marginality, is unimaginably difficult.

Frustrated by the flopping around that besets education policy in northern Australia, I wanted to learn how such hard-nosed regimes of accountability in the USA were established, what the characteristic resistances were and if the attempts were being repaid in terms of improved outcomes for disadvantaged students. All this to know whether aiming for similar pathways would be worth pursuing in the Northern Territory—and if so, what it would take and how.

During my tour, I explored many issues organised around the following questions:

- If others were faced with our challenge of assembling policy-impacting research capacity from bare beginnings, with an opportunity to work closely with government and schools to implement change, what are the key decisions to be made from the outset? What lessons should we avoid, what should we emulate?
- Similarly, if we are to drive the legislative and policy frameworks to enshrine evidentiary funding, what obstacles would first need to be surmounted?

I have come away with a deepened appreciation of the complexity and importance of education as an intervention site that matters most to the health of populations (see also Lyon 2001). At the same time, post-industrial English speaking countries are upholding production patterns, including but not only within schools, which are rapidly becoming irrelevant. The ascendancy of English-only speakers is unravelling

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<sup>2</sup> For more on the details of this legislation, see <http://www/nclb.gov>

throughout the world, linguistically and economically (Graddol 2006). Flexible linguistic capacity, high competency in mathematics and science, and adroit ITC literacy<sup>3</sup> are key skills in the competitive markets of the future. Responding to these challenges is a highly resource intensive enterprise, even for advantaged populations (i.e. high wealth communities) in North America. Responding to these challenges for Indigenous Australians who are subject to the mad interferences of remedial policies and intermittent moral panics is even more difficult.

## ***What I Learnt***

Policy approaches to education reform may have greater resolution in the United States but there is no magic bullet. People everywhere are baffled about how to overcome inequalities of race, class and capital in rapidly changing social contexts, using the lonely instrument of schools. Even a lever as powerful as *No Child Left Behind*, for all its legislated attempt to link essential features of education reform with regimes of funding and accountability, is insufficient on its own. It is beset by all the problems of translation between policy declaration and practice that characteristically plague attempts to drive reform from the top down. In education the devil of failure really does lie in the detail of implementation.

In education, the devil of failure lies in the detail of implementation

A focus on actions at the unit of teachers and students will fail if contextual issues are ignored or left to the unlikely chance of having a good local problem solver at the school level working in harmony with an intelligent and enabling policy support environment. This is the stuff of both heroic individualism and blind optimism; and not the basis for improving the life opportunities of the bulk of our currently failing learners. Reforms to improve the capacity of individual teachers to transform learning outcomes must also attend to the capacity of schools and the quality of the support systems

available to schools within regional and central office administrations.

At the same time, access to quality research expertise and tested ideas for gearing schools to accomplish systemic reform must also be built. In other words, attention to capability building has to occur at all

There is clear evidence about what could and should be done

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<sup>3</sup> The outstanding work of the Centre for the Study of Learning and Performance should be noted here (<http://doe.concordia.ca/cslp/>)

levels of the equation for there to be improvements in the Northern Territory.

The good news is that there is clear evidence about what could and should be done—an extensive and robust evidence base for reading and mathematics has been amassed, together with knowledge of critical outside-school interventions and understanding of the pitfalls of sustaining gains. There is a verified body of knowledge on the science of reading and math acquisition and interventions that have proven effects for lifting the learning outcomes of failing learners<sup>4</sup>. There is convergence on best techniques for teacher professional development and content knowledge (Ball and Rowan 2004; Burney, Corcoran, and Lesnick (in press); Commonwealth of Australia 1998; Ramsay 2000); and for building the intellectual capacity necessary for inscribing evidentiary approaches into regimes of practice (Lyon et al. 2005). There is even information on requirements for taking reforms to scale without losing their original impact (Coburn 2003; Cohen and Loewenberg Ball 2006; Elmore 1996; Slavin and Madden 1996)

Implementing and embedding these knowledges is the singular challenge and requires solving the problems of:

1. translating approaches that have proven effect elsewhere for implementation in the radically different service delivery environments of northern Australia; and
2. tackling the detailed problems of school based implementation and policy consistency with the same dedication to systematic problem identification and tested resolution that medical interventions enjoy when operating at their best.

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<sup>4</sup> This is difficult to summarise but key resources and findings can be located as follows: for mathematics and science, see <http://promse.msu.edu> and the work of Professor William Schmidt (<http://ustimss.msu.edu>); for key summaries of the state of knowledge in literacy see Lyon, R. (2001) "Statement of Dr Reid Lyon Chief, Child Development and Behavior Branch, National Institute of Child Health and Human Development, National Institutes of Health," in Subcommittee on Education Reform, Committee on Education and the Workforce, US House of Representatives, pp. 10. Washington; McCardle, P. and V. Chhabra.(eds) (2004) *The Voice of Evidence in Reading Research*. Baltimore, Maryland USA: Paule H. Brookes Publishing Co; National Institute of Child Health and Human Development (2000) *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Government Printing Office NIH Publication No 00-4754 and for a recent summary of this in relation to Australian issues see Rowe et.al (2005) *Teaching Reading: Report and Recommendations National Inquiry into the Teaching of Literacy Commonwealth of Australia*.

Efforts in education research, policy and practice not only need to be of a higher quality, they must align with the interrelated tasks of

1. directly aiding schools identify and make changes needed to be more effective;
2. working systematically on the barriers to getting these changes in place, treating barriers to and distractions from implementation with technically expert and locally empathic strategising and resource resolution powers; and
3. investing in sustainability.

This last point brings us full circle to the issue of focusing on the training, support and development of quality teachers; administrators; leaders; and the parallel requirement for investment in education training standards, research and scholarship. Education reform theorist Richard Elmore describes this feedback loop elegantly when he calls for a reciprocity principle to be operating with equal force at all levels of the education system: namely, “For each unit of performance I demand of you, I have an equal and reciprocal responsibility to provide you with a unit of capacity to produce that performance, if you do not already have the capacity” (Elmore 2005: 245).

There is no question that Indigenous communities are besieged by multiple problems (usually called ‘dysfunctions’) which make the task of providing expert education responses that much harder. But until we can say we have done everything technically possible to ensure prepared and supported teachers are placed in our worst performing schools; to have practitioners and administrators base their decisions on research-proven knowledges—until we can say that all that could possibly be done to give teachers, administrators, students and parents the means to deal with the performance demands expected of them has been done—then reference to the pathologies of Indigenous people as *sole* explanations of education failure should be embargoed.

We will have reached that day when we can guarantee **the service delivery side of the reciprocity principle has been met**. This is not to say that Indigenous students and their caregivers are passive in the process or are innocent of contributing to endemic education failure. It is to say there is more that the state can do to discharge its responsibility to organise services responsibly and well, based on judicious compromises between best knowledges and available capacity. Isolating poor

attendance for blame, for example, is redundant if the services available to those who do attend regularly are not the best they could be. Teacher quality is the single most important school-related factor influencing student success and what's more, is the system's responsibility to provide.

Teacher quality is the single most important school-related factor influencing student success

There is very little evidence that training one teacher within a school is contagious. Having one expert and hoping that is sufficient is wasted effort and resource. The same principle applies to the notion of the lighthouse or exemplary school. Case studies of good practice are

useful as polemical devices to engender faith that change can occur. But it is impossible to replicate programs that are built around under-codified know how, cherry-picked teams or growth under idealised circumstances without graduated and tested transition to more ordinary circumstances. Given this, my focus during this Fellowship also looked at issues of effect, capacity, sustainability and scale.

However, it may be that the only way to break free of the stranglehold of school traditions is to support the development of politicised independent schools, chartered to do what it takes to break the odds. Breakthrough approaches in the US are based on a bleak assessment of 'the system's' capacity to change and have taken matters into their own hands. Decisions about hiring, firing, facilities, programs and textbooks, standards, calendars and schedules are made inside the building, not controlled from the 'theys and thems' in central office. Such approaches risk even greater levels of racial segregation in our schools; but they can also propel standout results (see, for example, [www.uprep.com](http://www.uprep.com) and [www.kippschools.org](http://www.kippschools.org)).

## **We Already Know What To Do**

This is where most people in education start, as it seems the most obvious problem: knowing what to do. To this end, there are many efforts, domestically and in the USA, to make available key data on what works, to synthesise the evidence and produce the material in digestible summary form for policy makers and practitioners alike (see also "Generating Evidence" below). During my Churchill Fellowship I visited with many

people who are working toward producing trustworthy compendia of the evidence.<sup>5</sup> These efforts are worthy and necessary but not sufficient. In fact, we already know a fair bit about what we should be doing; we just can't seem to give it traction.

So what do we know?

Starting from the premise that different challenges exist for different age groups, a (highly stylised) set of intervention stages can be identified:

### School readiness

The precursors to school failure begin weaving into place, spun by the environmental constraints of poverty, disempowerment and geo-location in the years 0-3. Early interventions are an important part of attempts to disrupt the trajectories of at-risk children. This said; weak, unprofessional or lacklustre efforts are not likely to succeed. Solutions include:

- Quality early childhood programs and intensive before school preparation, using every available venue to provide integrative services (e.g. child care, play groups, pre-school, home visiting programs etc), in partnership with private-for-profit, state and NGO health and family service providers, focused on expanding the vocabulary range and cognitive stimuli available to the children of middle-class professionals in stable environments, in vernacular and English.
- Parenting programs for young mothers on how to effectively and responsibly care for their children and plan their own lives, complete their educations, find work and be choosy about the type of men they let into their lives (cf. Olds 2002).
- Follow up services extending into primary school.

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<sup>5</sup> The What Works Clearinghouse ([www.whatworks.ed.gov](http://www.whatworks.ed.gov)); the Comprehensive School Reform Quality Center of the American Institutes of Research ([www.csrq.org](http://www.csrq.org)); and the Campbell Collaboration ([www.campbellcollaboration.org](http://www.campbellcollaboration.org)) are examples of institutions undertaking outstanding work in terms of making education literature accessible, rating its effectiveness and quality, translating arcane methodologies of inclusion criteria and rating process into comprehensible terms etc.

## Kindergarten to 3<sup>rd</sup> Grade

The racially-steered achievement gap starts to manifest, and is sympathetically explained away, during the critical junior school years, with catastrophic results in the longer term.

Some solutions:

- Concentrated early literacy and numeracy development – preferably in the vernacular or first language (August and Shanahan 2006); and in all cases ensuring high quality instructional content with complex vocabulary exposure.
- Addressing the characteristic problems which upset quality instruction in immersion or bilingual schools alike, namely: staffing, training, complex curriculum encouraging high levels of achievement in primary and secondary languages, correct diagnosis of impairment.
- A well trained, well paid and stable cohort of Indigenous and non-Indigenous teachers are required en masse in early childhood with skills in direct and explicit instruction of basic and more advanced language, literacy and numeracy skills. Requires the alignment of standards of learning with standards of teacher preparation and competency.
- Prescriptive programs for reading, writing and numeracy seem to have greater chance of sustained impacts for disadvantaged learners, given high teacher turnover, erratic teacher quality and student mobility (see, for example, Success For All, a highly prescribed approach to preventing reading failure in early childhood and the most widely researched comprehensive early intervention program in the United States, <http://www.successforall.net/>).

## 4th-6th grade:

Sees increase of the achievement gap, self-awareness of stigma and the beginnings of disengagement, witnessed through higher levels of poor attendance and misbehaviour. Learning to read is more difficult after age 9, and those who have not developed foundational skills by this time are likely to be consigned to the less adept teachers for control or remediation, exacerbating the gap.

- Accurate diagnosis of struggling learners and attention to their circumstances

- increasing the level of intensity, cognitive demand and coherence of classroom activities to avoid plateauing (of both teacher proficiency and student performance)
- access to psychotherapeutic support programs that deal with the mis-attunement of young people and their often destructive attempts to meet their need for secure and close relationships in otherwise traumatic circumstances, such as Exploring Together<sup>6</sup>

### 7<sup>th</sup> – 9<sup>th</sup> grade (pre-adolescents and adolescents)

Transition to young adolescence and preparation to drop out, early pregnancies, substance abuse and increasing exposure to the juvenile justice system intensifies here, as young adolescents become aware of the stigma of failure and the gap between their academic skills and the dramatically more complex demands of the curriculum. Much school based instruction at this time is content specific and junior secondary teachers do not necessarily have advanced skills in conferring advanced literacy, numeracy and critical analysis for older students. Comparatively little attention is paid to developing replicable techniques for redressing reading and writing difficulties for this age group, even though the ‘education crisis’ is one of adolescent failure.

Needed:

- Advanced teacher preparation
- A relentless and respectful focus on content and test performance, making the rules of achievement stratification explicit
- Research and development into replicable techniques for redressing reading and writing difficulties for older children and young adults
- Combined with politically explicit work that gives students the skills to navigate and survive with positive self esteem the systemic racism that would otherwise see them streamed into vocational programs without jobs. Approaches here include programs for navigating youth aggression and violence, helping

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<sup>6</sup> Ngaripiliga’ajirri (pronounced Nari-pirlywa-tirri), an early intervention program designed for use in the Tiwi Islands of north Australia (see [www.cdu.edu.au/sspr/early\\_intervention.htm](http://www.cdu.edu.au/sspr/early_intervention.htm))

teachers, police, youth workers, and parents respond to alienated and rejecting youth.

- Interventions which give youth the identity resilience to cope with a wider world that, in urban settings (e.g. at night time near shopping plazas) does not love but fears them, especially if they are boys.
- Teaching teachers and students how to be alert to discrimination, alternatives to self-harm and violence
- The political pride to cope with the isolation that will attach to being an achiever when one's peers have built anti-inferiorisation cultures of resistance and aggression.

### 10<sup>th</sup> – 12<sup>th</sup> grade (senior school)

Reading, writing and math disabilities persist: they do not fade with time.

Few remote area students are performing age for grade at this level of secondary education. Those that are have learnt the rules and expectations of the school and have benefited from explicit and intense mentoring. They have been taught the skills necessary for manipulating and controlling high level content demands. Drill and practice AND creativity and nurture were ALL required. Mastery of an unnatural technique (math and reading; swimming or tennis; college readiness) requires no less.

### Throughout

- Scientifically informed, technically robust approaches
- System sanctions for staff and schools who fail to skill those elementary students who do regularly attend, assuming all system supports needed to lift achievement are in place.
- Localised power to hire and fire, based on attracting and retaining high performing teams. Exposure to quality professionals from 0-15 years, people who know their craft, whether black or white, is essential. That is, teachers who start with the kids' interests and broaden from there, who don't leave after one year but are interested and engaged and prepared to learn new techniques

through ongoing professional development; who do not teach to indigenous stereotypes and thus to underperformance.<sup>7</sup>

- Teaching reading, writing and math really *is* rocket science, involving linguistics, child psychology, behaviour, measurement, operational statistics, planning, expertise... standard teacher preparation, accreditation and professional development approaches must precisely skill teachers for the exacting work expected of them.
- Evidence-based health interventions within and out of school that promote psycho-social and physical health.
- Mobilising integrative services for particular problems (physical or intellectual disability, learning disorders, home problems, chronic absenteeism etc)
- Attention to attendance and retention, for both teachers and students. Northern Territory data indicate some Indigenous students are getting the equivalent of 1.5 years of school from K-7 based on their own levels of mobility. This under-exposure is compounded by teacher absenteeism and turnover. Redressing teacher attrition through comprehensive mentoring and induction programs, and workforce professionalisation, is a national priority and not a localised responsibility.
- Compensation programs to make up for the lack of domestic reinforcement in welfare-dependent, overcrowded homes: the compound effect of parents not having the skills, lacking material resources etc. This is critical. The racially steered achievement gap between white and black students is aggravated and widened every vacation and out-of-school period when the gap compounds. There is not one high performing, high achieving student anywhere in the world who has achieved such status through reliance on school exposures alone.

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<sup>7</sup> See the path breaking research of Professor Claude M Steele, Director, Center for Advanced Study in the Behavioural Sciences, Stanford University, on the profound effects of stereotypes on identity and performance.

## The Trouble With Policy

The above list was kept simple and could be reconfigured in many different ways. The bottom line is that we more or less know what should be done. So why are our responses so erratic?

Education policy researchers in north America have found that the greater the demand to deviate from given practices, the greater the reorientation from the prevailing status quo required, the higher the likelihood that innovation will be sabotaged or otherwise perverted without clear direction at every level of the policy-research-practice equation. The standout feature of the *No Child Left Behind*, ostensibly a policy framework with serious reform teeth, is the space between policy intent and field response, together with a refusal to name the forces of inequality properly. It is the same gap that makes us unable to diligently put in place what we know should be done. Holding a line requires tenacity, intelligence and courage.

The typical levers available to policy makers include: curriculum standards; accountability measures; standardised testing regimens; teacher accreditation and licensure (not practised in the Northern Territory although a new system of teacher registration exists); specific-purpose program funding; industrial relations policies (benefits and salaries); professional development; detailing such technicalities as the school calendar year; and finally, specifying the funding formulae for school staffing allocations. But while these features set the parameters of what can be influenced, there seems to be little evidence that they directly impact student achievement when centrally administered. In fact, achievement appears to come down to quality interactions between students and their teachers within schools, and overcoming the challenges students face in their life circumstances outside schools. When the policy levers are so concretised, and tagged to an outmoded industrial model of workplace relations, the ambit of what policy formulators can suggest as strategy is greatly restricted.

Unless expert help and real resources are directed at translating the 'shoulds and the oughts' within real schools—directly supporting practitioners and school partners in

resolving the barriers to improvement—all that can be expected is tinkering around an entrenched conventional core. Specifying global ambitions (e.g. ‘we must close the gap between Indigenous and non-Indigenous Territorians’, ‘attendance must improve’) provides insufficient guidance on how to go about meeting those goals: expert problem solving both in-situ and in the backrooms of policy are also required.

In line with its size, the Northern Territory education environment has relatively thin technical capability in its policy core. Such experts as exist are quickly spread too widely across too many issues to provide deeply knowledgeable guidance and practical know-how to schools in any consistent manner. The Commonwealth Government weighs in with prescriptions from afar which reify unprovable but popular models of causation, with no underlying science of time, cost or effect.

The key reform lesson to learn from the United States, writ large, is that if there’s dissatisfaction with results—and blaming students and their circumstances doesn’t suffice—preparing teachers and school leaders to expand opportunities for student achievement is critical. This is the essence of the Cuban education revolution, where the population majority is highly literate despite severe economic impediments. But when we ask a school to reform itself so that it breaks the odds of failure in the face of endemic poverty, impairment and challenge, simple things—like knowing what that effort might cost to achieve over what timeframe and for which subgroups and what tools will be required—are not precisely known in advance. For policy formulators to know what evidence is, or what something should cost, how to build content knowledge in instruction or how to support systemic school reform, they need themselves to have technical expertise or be knowledgeable enough to know what they don’t know and astute enough to seek help from networks of knowledgeable others within and without the education sector.

Intellectual starvation is a genuine issue affecting the quality of thinking and problem resolution in Indigenous education

Intellectual starvation is a genuine issue affecting the quality of thinking and problem resolution in Indigenous education. It is of note then that there are so few resources dedicated to lifting the administrative skill, research expertise and technical competence of the support services available to schools which are facing the toughest education problems this country has to solve. Available systems are not geared to

meet these capability issues. Locally, there is no education equivalent to the Menzies School of Health Research; nationally, no funding equivalent to the National Health and Medical Research Council; while investment in administrative and research depth is a hard political and electoral sell (especially at the moment, when attention is being paid the administrative impost skimmed off money that is designated for Indigenous schools). Given this, common sense becomes the form of knowledge education decision makers—and their critics—tend to draw upon.

During this Fellowship I examined numerous efforts to create closer dialogue and engagement between research, policy and practice. Many models emphasise involving policy makers and stakeholders within the research setting, either as board members or in regular feedback and discussion sessions, packaged in various user-friendly ways.<sup>8</sup> All recognise the importance of engagement and mutual influence. But the only model I saw which directly tackles the issue of bringing the best minds to bear on the issue of policy translation in the field, not to comment on or critique adoption or take-up but to jointly solve those very problems, was the Strategic Education Research Partnership (SERP), a development within the National Academies of Science (<http://www7.nationalacademies.org/serpinstitute/index.html>). Led by policy theorist Suzanne Donovan, SERP aims to construct a powerful knowledge base to support the efforts of teachers, school administrators, colleges of education, and policy officials with the ultimate goal of significantly improving student learning. After some years of examining the disconnect between research and practice, they found that synthesising information was not sufficient to change practice and that knowledge by itself very rarely changes the enduring structures and practices of schooling for the better.

It is the fine-grained details and decisions unable to be made that get in the way of improvement: how to reallocate resources within the fiefdom of schools; finding time for 'content time on task' amidst the clamour for assessment and community relationship building; organising the school timetable so that students are assigned to the instruction they need at the intensity they need it without disruption; attracting and retaining quality staff; and so forth. Thus, the problems are not only in evaluating and

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<sup>8</sup> Ideas include regular newsletters and policy-relevant snippets, issued as podcasts, theme specific seminars, lunch meetings and roundtables.

adopting the right pedagogy so that teachers have methods which on average work best for their student type, together with intensive tutoring programs for those who need the additional assistance. They are also lie in taking obstructions to implementation seriously and dedicating expert thinking to their resolution in partnership with practitioners and administrators, treating such issues as high priority 'R&D' challenges in their own right.

Working out the practicalities of school reform, with independent funding from foundations; appropriate time given to planning; and such well-reputed researchers as Richard Elmore and Catherine Snow from Harvard University engaged in the nitty-gritty of practice, SERP is straddling the space between the conceptual picture of reform and what teachers need if it is to happen in classrooms, beyond issuing more kits, recipe lists and resource packages.

Another initiative worth pursuing is the development of executive programs for education administrators and leaders, in partnership with state and federal governments and Indigenous advocacy groups, covering the following (indicative) emphases:<sup>9</sup>

- Education economics and cost effectiveness techniques
- Scientific research design, theory and methods in education
- Global and national trends affecting education, employment and training
- Applications in multi-lingual and development contexts
- The class- and race-as-destiny effects in education
- Models of education accountability, reform and improvement
- Building and sustaining school excellence

### **Recommendations arising**

To build capability within research and policy to provide continuous support to struggling schools

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<sup>9</sup> Models of R&D partnerships in education can be drawn from many US universities: stand out examples exist at the University of Pennsylvania's Graduate School of Education; Colorado State University's R&D Center for the Advancement of Student Learning; and Michigan State University's Education College and Center of Education Policy.

- (i) *Develop the research infrastructure to support Indigenous education reform* through coordinated research capacity building; strategic thinking and resourcing. This is a case where the current erosion of public research must be arrested.
- (ii) *Create a reliable national funding source* for the development of state-of-the-art *research*, development and administrative expertise, akin to the National Health and Medical Research Council, including funding for graduate scholarships and post-graduate fellowships
- (iii) *Develop a Centre of Excellence in Applied Education Solutions* in northern Australia for designing expert problem resolution and implementation science at scale for failing learners in northern remote and regional Australia
- (iv) *Establish graduate programs* in education policy, school reform, technical assistance and scientific research methods accessible by administrators and practitioners (from schools, training and higher education sectors) across northern Australia.

## **Teacher Preparation**

Preparing teachers for the high poverty, high compromise learning contexts faced in northern and regional Australia should be among our frontline responses. The lack of ability to attract the best trained teachers to work in the most besieged schools cannot be left to chance. There are two issues: preparing teachers for the task, and training teachers on the job. Systems of hazard pay and professional preparation are required, with fresh analysis of the incentive structures required, drawing on other domains of practice (e.g. medicine) and international development contexts. Once again, the research base for the training and preparation of teachers for Indigenous education contexts aimed at addressing the revolving door issue is surprisingly thin, given the scale and cost of the problem—both human and financial.

We should explicitly assume both Indigenous and non-Indigenous teachers are required: the key points of separation are the different problems posed by cultural congruence with Indigenous teachers, and dissonance with imported teachers. Turnover rates at the present time are such that large numbers of expatriate teachers are unlikely to remain in the profession beyond their first three years. Professional, social and psychological preparation techniques must therefore be aimed at enabling them to be effective quickly, without doing violence to their own self-esteem or

impeding their students' intensive and focused development.<sup>10</sup> The people who train teachers themselves need to bring advanced multi-disciplinary expertise to the task.

The education sector gets barraged by many demands: it names Professional Development (PD) as the solution to much of it. Without focus, PD can become a luncheon buffet of episodic and wasteful effort rather than focused and sustained change: it takes a strong leader to refuse the temptation of adult excursions to instead concentrate on approaches that work around a limited number of priorities.

An argument advanced in the profession is that all professional development ought to be on-the-job, controlled by teachers and be focused on pedagogy, not content. Yet the evidence suggests the contrary is true: namely, that when PD combines intensive education about the curriculum (that is, content specific knowledge) and digs deep into the 'how to' of an issue (e.g. sequencing, common student misconceptions, appropriate responses etc), supplemented by on-site support and collective study groups, this produces sustained effects for students. The combination is important.

- Simply doing the equivalent of a summer institute or workshop retreat with no follow up is inadequate, as it will not have any bearing on practice.
- Similarly, having content experts on site tends to fall over with turnover, and as noted at the outset, one teacher is not contagious.
- Evidence on whether coaching changes practice is very thin/weak. People who become site coaches are usually classroom teachers without deep training in the analysis of adult instruction so it usually becomes a case of 'me sharing my craft knowledge judged by smile sheets at the end' (and the quality of the refreshments)
- PD is about adult behaviour change: the delivery system is different from the content. PD should be about deepening teacher knowledge so they can teach deeply. Deep immersion is best done off-site followed by on-site reinforcement.

## **Recommendations arising**

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<sup>10</sup> I thank Emeritus Professor Ken McKinnon for highlighting these points.

- (v) *In the short term, a thorough systematic review of teacher preparation and retention approaches* should be commissioned to compose a cohesive Territory-wide/remote and regional Australia strategy aimed at making a lasting difference, notwithstanding the lack of resources, lack of teacher skills, risk of insufficient long-term commitment to the task of Indigenous education etc.
- (vi) *Combined with urgent attention to developing intensive immersion processes* (three to six month duration) teachers would undertake, acquiring scientific techniques for literacy and numeracy acquisition (foundational and advanced) and 'how-to' skills for conferring in Indigenous contexts.
- (vii) *In the medium term, create an alliance between Charles Darwin University (CDU) and Batchelor Institute of Indigenous Tertiary Education (BIITE) to assist faculty in their task of preparing teachers.*
- The National Council for the Accreditation of Teacher Education ([www.ncate.org](http://www.ncate.org)), a specialised accrediting body for teacher training colleges in the USA, have a large grant to work with faculty in 'minority-serving' tertiary institutions to essentially train the trainers of Hispanic, black and native American teachers in the techniques of scientifically based reading strategies ([www.rften.org](http://www.rften.org)).
  - Such a process could be usefully emulated on a research trial basis in the Northern Territory, incorporating additional information on reading instruction for minority language learners in the process.
  - The aim would be to provide teacher trainees a deep knowledge of scientifically based reading instruction and the skills necessary to apply effective instructional practices, including proven ways of creatively engaging poorly literate parents.
- (vii) *In preparation for the above, convene an expert roundtable of researchers, instructional designers and practitioners who have examined best practice in teacher education; minority language learner issues; reading, science and numeracy methods to develop and trial new paraprofessional and teacher training approaches for Indigenous students under researched conditions.*

## Generating and Caring for Evidence

The case for evidence based policy in Indigenous education seems incontestable but the challenges are multiple. While the need for improved outcomes is great, the documented record of proven approaches for remote area education service delivery is scant. Such evaluation findings as do exist rely on too small case studies, is often advocacy based, and does not deliver sufficient information (longitudinal, randomized, clear effect sizes, validated and replicated) to be trustworthy.

How then to generate better evidence and how to discern what might or should work when all we might ever have to go on is choppy/fragmented or puny evidence? How to convince people in policy, research and practitioner communities that even so, capacity building for generating evidence matters? How to develop effective strategies in the immediate term so that the needs of students in schools this year and next are being more effectively addressed? How to stop people expecting miracles of the few interventions that are being tested for effect or replication in the same moment they are still being tested?

In the United States, the *No Child Left Behind* policy framework, with its mandating of evidentiary interventions, has supported a correlated interest in long term experimental and quasi experimental research. This emphasis is highly controversial and the gold standard accorded to randomised controlled trials in national policy is contested with particular vehemence. Wading through the caricatured objections thrown up in defence or offence in this debate is difficult. On the one hand, it seems that education research sorely needs to be more trustworthy and robust; on the other, the small quantum of studies that meet the high standards of evidence developed by such bodies as the *What Works Clearinghouse* tend not to be all that useful for setting policy or dealing with the 'real world' of the classroom. This is a perennial problem, and while I searched, I have not found a means to bypass this issue in any agency or country.

Translation and implementation evidence based literacy and numeracy approaches in fourth world contexts, and reform of technically and administratively weak systems are urgent R&D priorities

As noted, some research outfits have made a specialty of contributing to systematic analyses of the evidence, creating various forms of clearinghouse to provide reliable verdicts to time-poor third parties.<sup>11</sup> My question when looking at such systems was: would the effort required to amass such repositories be worth it in terms of return for scant dollars in the north as a means of driving a greater respect for and knowledge of evidence?

My verdict is no, or not as our first priority at this time. Rather, while we should use all occasions when literature reviews are asked for to undertake systematic and meta-analysis (if for no other reason than the experience of doing so would itself serve as good methodological boot-camp), we should also recognise that much of the work of determining evidence on the science of reading, maths and science, and programs for embedding this knowledge into instructional techniques, has been amassed elsewhere. Translation and implementation of this body of knowledge in fourth world contexts, and reform of technically and administratively weak systems, are the research and development challenges that require most urgent attention in our region.

In other words, in northern Australia, we are best off building resident capability in the primary scientific research technologies necessary for replicating sound initiatives at scale, testing initiatives for impact (using experimental research techniques such as randomised assignment), partnering with Indigenous organisations and building greater policy and reform intelligence than vesting in another 'what works' clearinghouse or best case studies approach. The latter are best operated with national resources. Despite good intents, they are inevitably too divorced from the tough issues of implementation in communities separated by huge distances, challenged with multiple problems and hungry for immediately do-able answers to be of much practical use in the field. This said; the capacity to undertake systematic reviews of relevant literature would be a beneficial side-effect of building such applied resident R&D capacity and should be deliberately built into analytic opportunities within both research and inside-public sector projects.

**In the meantime...**It would be true to say that, save some dramatic turnaround on the resourcing front (as per recommendations re national funding above), the Northern

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<sup>11</sup> Member organisations of the Campbell Collaboration are relevant here (see [www.campbellcollaboration.org](http://www.campbellcollaboration.org))

Territory cannot hope to establish research resources at the scale and flexibility required for quality work, at least not in the immediate future. Quality education researchers with knowledge of scientific design techniques are thin on the ground, and no moves are afoot either locally or nationally to invest in the creation of a more densely populated gene pool. Research-based development takes such a long time to generate reliable facts, especially when the infrastructure has to be established from a standing start, that few in government have the patience for it. It is thus unlikely that we will have the funding or critical mass of trained personnel to undertake systematic translation work in the foreseeable future.

This directs us to the related issue of getting policy managers, school leaders and teachers to accept evidentiary approaches, to understand how to select out and assess findings generated elsewhere and to develop strategies that take political and intellectual courage, skill and cunning to implement well in heated local environments. Educators are trained to believe that what matters is approach and argument, not evidence or ‘positivist’ research. In their original training and in-house professional development, coursework materials will be on creativity, values, different learning styles, autonomy, self-realisation, inquiry based and reflective learning etc. There is a very big difference between this and how other professions learn to respect and understand evidence and expertise.

### **Recommendations Arising**

To make significant progress in dealing with these conundrums, several tracks need to be pursued simultaneously:

- (viii) *Take every opportunity to create education practitioners and administrators who believe that to be a professional, technical knowledge matters, not whim or anecdote. Practitioners and administrators are not excluded from but integral to the solution of evidence-based practice. For example, provide greater support for lecturer-practitioners and researcher-practitioner roles, with funding to accompany applied research roles. Ensure all literature reviews—whether generated within government or higher education sectors—deploy systematic review techniques, to build expertise in the process of discerning evidence in published literature from the upholding of past practice/current ways of doing business or passionate claim.*

- (ix) *Incorporate research methods training into all forms of professional development:* from undergraduate teacher training to graduate programs; graduate policy and administration programs; and in-house professional development opportunities—essentially wresting back space currently dedicated to action research and reflexive learning in continuous professional development circles.
- (x) *Create alliances with the health sector* to build multidisciplinary professional expertise applied to education issues. The disparity between health and education research funding could be partly overcome through strategic partnering for capacity and resource sharing, particularly in building competencies for evidentiary research, enabled through regional and national funding incentives. This would also alleviate the shortage of skilled education researchers in northern Australia.
- (xi) *Push the need for a resourced Indigenous education policy,* practitioner and research expertise agenda to be on Office of Aboriginal and Torres Strait Islander Health (OATSIH) and other Indigenous advocacy platforms (including the Land Council networks).
- (xii) *Build regionally attuned expertise.* Scientific research on causes of learning failure and research on what works on the front line of school based practice are both required but require different emphases. Applicability in rural and remote Indigenous Australia must grapple directly with unique contextual constraints and offer solutions designed and tested for feasibility in practice. This should be the focus of regional centres.

Skills to translate and transfer the scientific research undertaken in better resourced research ‘laboratories’ nationally and internationally should also be built regionally, not with a view to mindless replication but with attention to developing practice-wisdom about questions that matter: context, mechanism, outcome, sustainability. How can we make different approaches work, for whom, under what specifiable conditions and contexts, for what dollars?

## The Dollar Issue

The children of the professional middle class increase the social capital of their children every chance they get, compensating for what the ordinary school system does and doesn't deliver and instinctively spack-filling any school defects. This can obscure the class stratification that inheres in schools yet impacts on achievements in the classroom.<sup>12</sup> The lasting education damage that began with inequality at the starting gate is revealed in some brutal statistics: of young people aged 10 to 17—still boys and girls—Indigenous youth are 20 times more likely to be in detention than non-Indigenous children of the same age group. Indigenous children make up 93% of juvenile detention in the Northern Territory, of whom 75% will go back in. 81% of the daily Northern Territory prison population is Indigenous: mostly male, mostly illiterate. No matter how one explains it, it is an insidious and cruel culling system.

No matter how one explains it, it is an insidious and cruel culling system

No one can reasonably expect schools to overcome structurally and historically determined layers of socio-economic disadvantage to equalise achievement, nor should we throw up our hands. The onus is on the community of would-be intervenors to be precise about their programs, including on the true costs of educating a disadvantaged and compromised learner to yield the desired parity of outcome.

Interestingly, such calculations are not currently possible within either the research or policy arms of the Indigenous education system. Why?

Exploring this question with leading education economists in the United States, the main culprits are lack of policy demand and lack of analytic capacity. As with other key areas of education knowledge, advanced methodological training in cost analysis is not routine in education and cost factors are not incorporated sufficiently early into the data retrieval stage of study designs to generate robust findings.

The importance of such work cannot be overstated. Without evidence about effect and cost underwriting its key assumptions, the education system takes very large shots in the dark with sorely-needed resources. This leaves aside the issue of estimating the

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<sup>12</sup> But see [www.ichr.uwa.edu.au/waachs](http://www.ichr.uwa.edu.au/waachs) for confirming Australian material.

fiscal burden of education disadvantage. Notably, the Ian Potter Foundation has made an important contribution to this lack in sponsoring the establishment of an inaugural Ian Potter Foundation Fellow in Education Economics at Charles Darwin University. Despite catalysing important activities, like the lone teacher, one position is not enough to build a critical mass of expertise. This shortage issue needs to be tackled as part of the move to build critical research infrastructure more generally.

Finally there is the difficulty of attracting alternate funding into the Indigenous education research-policy-practice nexus outside government funding streams. This issue is not easily solved. Indigenous Australia is a small blip on the radar of major league philanthropic and industry investors, who perceive no particular tax advantages to investing in Australia and reasonably enough, assume that since this is already a first world country, large amounts of supplementary funding are not required. The best hope is for an independent indigenous advocacy alliance to make the case more convincingly that government dollars are not sufficiently flexible or entrepreneurial to create education breakthroughs.

## **A Note on Language**

No analysis of Indigenous education reform can fail to comment on the issue of language of instruction, a vexed topic which tends to subsume and reduce some of the other considerations that are foregrounded in this report. Many of my thoughts on this issue remain best summarised in *Learning Lessons* (Collins and Lea 1999).

However, the empirical findings of longitudinal research by Professor David Francis (Optimizing Educational Outcomes for English Language Learners, see August et al. 2006), confirmed in the forthcoming report of the *National Literacy Panel for Language Minority Youth and Children* (August and Shanahan 2006)<sup>13</sup> are canvassed in brief here.

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13 For the past four years, the Center for Applied Linguistics (CAL) has managed the work of the National Literacy Panel on Language-Minority Children and Youth (NLP) in collaboration with SRI International. The Panel was charged with reviewing and synthesizing the research literature on the acquisition of literacy by language minority learners. Their report is due imminently. Among other things, they found much of the research literature is weak and untested, philosophical or opinion based, requiring that highly caveated conclusions be drawn from very limited material.

- A small to moderate benefit attaches to bilingual instruction. The effect size of 0.3 is not inconsequential but not so large national policy can be set on it, as there is huge heterogeneity in outcomes and variability in effect sizes.
- Ideally, systems aim to provide instruction in the language in which they can guarantee the highest quality instruction. If this cannot be guaranteed in the first (original or vernacular) language, then provide it in the 'second' (English).
- If the desired attainment is true bi-linguality—that is, effective speaking and writing in both one's first and learnt languages—then providing quality instruction in the first language pays huge dividends:
  - A student will get stronger outcomes in their first language if they have to study its formal properties, otherwise their proficiency in the first language will remain that of their parents and peers.
  - As with English, to have a sophisticated written and oral vocabulary, and capacity to articulate complex constructs, one has to study the language formally and intensely.
  - Such intense language study has benefits for content knowledge in other subjects but these benefits absolutely rely on the pedagogy and content being of the highest quality and the students having advanced proficiency in their first language.
- The model of two teachers co-instructing, a native speaker and an English speaker, can be highly effective if the student is guaranteed they're getting the best of both languages of instruction.
- Teacher education programs need to move beyond preaching appreciation for the Indigenous cultural and linguistic diversity toward practical strategies for being effective instructors in ESL contexts.

## Conclusions

One of the problems with looking at the richly endowed university and policy environments of north America is bringing it back to the tough dirt of northern Australia. In this report I have attempted to isolate malleable issues for action knowing the Northern Territory context. All attempts have been made to identify practical strategies, knowing we do not a blank social or administrative page and radical overhaul has not been mandated.

In summary it presents a very simple case: Indigenous education will not improve without clear design principles for large scale improvement. A research priority is developing concrete and implementable knowledge about the design requirements for large scale improvement processes, built on reliable findings from established bodies of knowledge internationally, to wean policy makers and funders off their normative and ultimately ineffective approaches. Executing consequential education reform in northern Australia requires a re-routing of expertise and resources against the grain of existing institutional norms and embedded structures. Such a shift requires an informed policy and practice environment determined to support approaches which yield the greatest benefits proportional to costs.

The infrastructure to support such an informed environment does not exist and requires dedicated attention to build; including to the development of a research workforce, together with alignment of associated funding and national strategic priorities. At the moment it is nobody's job to build the research infrastructure to support indigenous education reform; thus, no one is really focused on the overhaul, coordination and intellectual investment required.

Given that serious school reform cannot be achieved by waiting for all the contextual circumstances within and without schools to be first put right, nor for the research infrastructure to be in place and generating useable knowledge, a first order priority is equipping teachers with immediate skills to hit the ground running.

I am also convinced that Indigenous leaders need to seize the agenda and drive excellence in schooling, to the point of establishing independent (charter and virtual) schools designed around known principles of achievement. Education is only just beginning to field an informed Indigenous advocacy critique. This is a healthy signal change in the politics of education and will support the drive for greater system accountability.

The Knowledge is Power Program (KIPP) in the United States is salutary.<sup>14</sup> A network of autonomous, free, open-enrolment (no cherry picking of students) middle schools, KIPP schools boast a critical mass of outstanding educators, more time in school, a focus on instructional efficiency, a rigorous college-preparatory curriculum, and a strong culture of achievement and support to help students from under-resourced communities throughout the United States make significant academic gains and continue to excel in high school and college. Days might extend from 7.30am to 5pm weekdays, with extra classes on Saturdays and longer school years. The key tenets (or "pillars") of the KIPP model—high expectations, choice and commitment, more time, power to lead, and focus on results—draw on familiar policy declarations.

But, like successful interventions that have been taken to scale, success depends on implementation fidelity, or what I have been calling the detail issue. A universal problem in education is the complex issue of taking promising approaches and sustaining their effects in arduous circumstances, itself an undeveloped science demanding priority attention. There is no getting away from the fact that whatever interventionary programs are worked up, they need to be based on approaches that are research-informed, intensive, high quality and ecologically pervasive.

Interventions need to be research-informed, intensive, high quality and ecologically pervasive

My key, essentially optimistic offering can be stated as follows: the problem is not that we don't know what to do but that we don't know how to implement and build systems to sustain what we know we need to do. So we need to approach the detailed nitty grit of implementation and sustainability as a mythically ideal scientist would: by designing experiments that involve taking risks, and honestly evaluating the results to incorporate the best that we know, whilst having the courage to hold a line.

Finally, it should be noted that this report has been written with a view to providing a generalist audience an outline of the issues explored during this Fellowship and their context. Despite the desire to be practical, many of the recommendations identify what *should* happen if the architecture for a logical education system were to be built. But

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<sup>14</sup> For an independent evaluation funded by the William and Flora Hewlett Foundation see <http://www.sri.com/policy/cep/choice/KIPP.htm>

even if it were agreed that preparation of teachers and investment in evidentiary processes were warranted, the simple truth is, given the law of natural averages, only a small percentage of the output of these initiatives would represent clever breakthroughs; much would be more ordinary and pedantic. The human habit of creating self-interested organisational systems would apply as much to newly invested research and training endeavours as to old. This can be predicted. It does not constitute an argument against the attempt, as the 5% - 20% of seminal material and effective program development which would nonetheless emerge would be a quantum improvement on the strategic environment that exists now.

In this light, a second version of this paper is also being prepared which is even more direct about what has to be done to secure improvements in the short to medium term.

### ***Key points summarised:***

1. Within school settings, only teachers (and students) can directly improve education results: every other effort should be an attempt to mediate, support or amend that primary relationship, near or far. Teacher preparation processes, pre- and post-service, must be made sufficient to the task of preparing teachers for the challenge of teaching highly disadvantaged populations. Substantive work in this area, drawing on tested techniques for conferring literacy and numeracy, and the advanced curriculum that follows, is critical for northern and remote area Australia, especially since national research and policy bodies are distant from the specificities of remote area work.
2. Intensive early childhood interventions so that children are prepared for school, sustained by quality instructional strategies thereon
3. Attendance and retention of staff matters to and for attendance and retention of students
4. Focused teacher AND policy administrator selection, training and development
5. Investment in applied work which tests the effectiveness and measures the costs of interventions and strategies (including, for example, best means of providing technical competence to teachers through evidence-based professional development techniques) building cross disciplinary expertise in the science of education
6. Lending our best minds to solving detailed problems of implementation, from timetabling through to the psychological skills required to combat youth alienation.
7. Providing Indigenous leaders information to demand better from education services and activities at each of these interrelated levels (policy, research and practice)
8. Creating the equivalent of Indigenous charter schools, with independent as well as government funding, to mobilise the best knowledges for breakthrough results outside conventional constraints.

## ***Recommendations Summarised***

- (i) Develop the research infrastructure to support Indigenous education reform through coordinated research capacity building; strategic thinking and resourcing
- (ii) Create a reliable national funding source for investing in the development of state-of-the-art education research, development and administrative expertise
- (iii) Develop a Centre of Excellence in Applied Education Solutions in northern Australia
- (iv) Establish graduate programs in education policy, school reform, technical assistance and scientific research methods
- (v) Conduct a thorough systematic review of teacher preparation and retention approaches for application in remote and regional Australia
- (vi) Develop intensive immersion processes (three to six month duration) for incoming teachers
- (vii) Create an alliance between Charles Darwin University (CDU) and Batchelor Institute of Indigenous Tertiary Education (BIITE) to assist faculty in their task of preparing teachers.
- (viii) Convene an expert roundtable of researchers, instructional designers and practitioners who have examined best practice in teacher education; minority language learner issues; reading, science and numeracy methods to develop and trial new paraprofessional and teacher training approaches for Indigenous students
- (ix) Take every opportunity to create education practitioners and administrators who believe that to be a professional, technical knowledge matters
- (x) Incorporate research methods training into all forms of professional development
- (xi) Create alliances with the health sector to build multidisciplinary professional expertise applied to education issues
- (xii) Push the need for a resourced Indigenous education policy onto Indigenous advocacy platforms
- (xiii) Build regionally attuned expertise.

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## ***Dissemination Program***

In addition to directly informing my policy and research leadership with what I have learned on an everyday basis as opportunities arise, findings are to be disseminated via a program of talks, colloquia, publications, editorials, media talks and the initiation of new projects.

A policy roundtable drawing on key reformers within and outside government in both countries is intended in 2007. Discussions with both the Australian embassy and potential Australian sponsors have commenced to this end.

A second version of this paper which summarises key issues and highlights immediate actions, given the reality of existing constraints and the unlikelihood of investments called for above, is being prepared to identify what can be done more immediately to bring about improvements in what we have now.

*An initial program of formal dissemination activities follows:*

### **26<sup>th</sup> May 2006: Seminar School for Social and Policy Research, Charles Darwin University**

Challenges of driving evidence based policy in the Northern Territory

### **29<sup>th</sup> May Briefing CEO Northern Land Council**

### **29<sup>th</sup> June 2006 Royal Darwin and Darwin Private Hospitals**

Key note address, Physicians and Paediatricians' Dinner: "The challenges of driving evidence based reform in a frontier environment: Lessons from America"

### **3<sup>rd</sup> - 4<sup>th</sup> July 2006 CHASS Centre Directors Meeting, University of Technology in Sydney**

Meeting of research centre directors in the Humanities, Arts and Social Sciences to discuss pressing research and policy issues for the sector: opportunity to table priority of applied work in Indigenous education

### **12<sup>th</sup> - 14<sup>th</sup> July: Invited Speaker, Department of Education and Training Victoria**

Series of presentations over three days to senior policy makers and school administrators on the Churchill program: "Looking at the evidence base for improving education outcomes"

### **23<sup>rd</sup> July: Free Lunch Talk, Northern Territory Library, Parliament House**

July Speaker, public seminar series: 'The education effects of race, class and location: Northern Territory compared with the United States – what can we learn?'

### **4<sup>th</sup> - 8<sup>th</sup> August 2006 Garma Festival, Arnhem Land** Key theme: Indigenous Education and Training

Responsible for policy synthesis and write up of recommendations for the Garma Forum report

Meetings with Indigenous leaders from across Australia, including the Yothu Yindi Foundation, Marcia Langton, Central and Northern Land Councils; with key media contacts including Phillip Adams and Jeff McMullen

Inclusion of key contacts established during Churchill Fellowship from New Zealand and Canada in Forum Program, including pursuit of ongoing collaborations

**28<sup>th</sup> August – 1<sup>st</sup> September University of Western Australia**

Policy Seminars, Institute of Advanced Studies

**4<sup>th</sup> - 7<sup>th</sup> September, International Evaluation Conference, Holiday Inn, Darwin**

Address: "Is There A Case For Evidence Based Policy In The Northern Territory Education Sector?"

**25<sup>th</sup> -27<sup>th</sup> September 2006 37th Public Health Association of Australia Annual Conference; "Tackling the Determinants of Health from the Bush to Bondi" Sydney**

Convention & Exhibition Centre, Darling Harbour, Sydney, NSW

**27<sup>th</sup> -30<sup>th</sup> September 2006 Australian Anthropological Society Conference 2006** Beyond Science and Art: Anthropology and the Unification of Knowledge

**Throughout: Northern Territory Department of Employment, Education and Training**

Presentation on key findings to the CEO and Executive Board of Management

Publication of key findings in departmental media, newsletters and staff forums, including lunch-time 'brown bag' sessions