Australian Education Union

Submission to the

Productivity Commission Study
Schools Education and Training Workforce

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Introduction

The Australian Education Union is an organisation of employees registered under the provisions of the *Fair Work (Registered Organisations) Act 2009*. It has approximately 186,000 members employed in government schools and public early childhood work locations and in public institutions of vocational and/or technical and further education and training as teachers, school leaders and education assistance or support work classifications. Of these approximately 170,000 are employees within the schools workforce. AEU members therefore comprise the vast majority of the government schools workforce.[1]

Given this membership, the AEU is uniquely placed to comment on the wages and working conditions, the pre-service and in-service training and professional development needs, the motivations and aspirational goals of the teaching and wider schools workforce. Our members work daily with students of all ages and abilities, from all geographic locations and from all socio-economic, cultural and linguistically diverse backgrounds. The AEU and its predecessor organisations, its Branches and Associated Bodies and its members have over a hundred years of experience in advocating for the educational needs of students and the wider Australian community.

The AEU welcomes the opportunity to make an initial submission to the Productivity Commission on its Terms of Reference concerning the Schools Workforce and on the questions it raises for discussion in its Issues Paper.

This submission takes its structure from the topics and questions outlined by the Commission in its Issues Paper and takes into account the Terms of Reference. Not every question or issue for discussion raised by the Commission will be addressed.

The AEU notes the Commission has completed its study of the VET workforce and is also currently conducting a study of the Early Childhood Education workforce. The AEU notes below that the three workforces are not always 'separate identities'. The schools workforce does provide early childhood and VET education, e.g. teachers accredited or registered to teach in school systems may be required to teach pre-school age children where such provision is delivered as part of traditional state-provided service delivery. Similarly, school teachers may be required to provide VET to students in the post-compulsory years of secondary school education. This can place quite unique professional training and development requirements upon the workforce.

The AEU submission concentrates upon the unique position of government or public schools. The distinctive character of these schools lies in the fact that they are part of a system which has the legal responsibility to provide universal access to quality school education.

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[1] Productivity Commission, *Schools Workforce*, Issues Paper, June 2011, Table 2.

Government schools are unmistakably the main provider for groups which are educationally disadvantaged and/or have special needs. The vast majority of low income (77%), Indigenous (86%), disability (80%), provincial (72%) and remote/very remote area (83%) students attend government schools.[2]

The AEU makes the point that there is nothing new about the content of the Commission's Terms of Reference or the issues it raises for discussion. These issues have been endemic to schooling for as long as there have been schools. Consequently, as well as our analysis of each issue relevant to our submission, the AEU will refer the Commission to a vast range of current Australian and international reports as well as academic studies which will assist the Commission in its study.

Given that processes of reform of government action inform the Commission's Terms of Reference[3], the AEU emphasises that experience and evidence show reform will only ever be effective when it is properly resourced and where it has been developed and driven with the support of those who will ultimately be tasked to implement it, the workforce.

In this respect, the AEU submits that the Productivity Commission should be mindful of the issues identified by Levin (2010a), who, as an extremely experienced educational administrator and distinguished academic, is worth quoting in some length:

> *Over the last few decades many efforts have been made to address education issues through policy at various levels. Looking at these efforts around the world suggests that they have often been motivated more by beliefs than by evidence of impact. Not only are the wrong policies often adopted, but effective implementation of education policy is often lacking ... Education reform efforts would be stronger if they gave more attention to reliable research evidence and a greater focus to what is known about effective teaching ... (p. 739)*

> *Governments are driven to tinker with the levers they control most directly whether or not those are the real drivers of outcomes. The main means used to try to generate improvement have most often been around structural aspects of the system – governance, finance, workforce, and accountability or incentive systems. Most of these can be changed relatively easily, at least on paper, through policy edicts, and the changes have been deeply influenced by dominant ideas rooted in economic systems such as managerialism, choice, markets, and incentives. Thus, the emphasis on decentralization, competition, leadership, inspection, and accountability.*

> *There is considerable research evidence now on many of these efforts and, to sum up many studies in a few words, it is hard to find much evidence of sustained improvement in outcomes resulting from these efforts. Structural changes have almost always had disappointing results ... (p. 740)*

> *At least two elements are critical to successful implementation ... First, it is essential to recognize that implementation also implies adaptation. Lasting school improvement will not come from the mindless adoption of someone else's plan or program, but must involve thoughtful participation by many people within each school and community.*

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[2] Cobbold, T., (2010), *Closing the Gaps*.
[3] The Commission's Terms of Reference are included as Appendix 1 to this submission. See the section, 'Background' under those Terms.

Daily life in schools, and the experience of students, is shaped by the beliefs and intentions of the participants. If there is one thing we have learned about education policy, it is that ordering people to do better without engaging their hearts and minds cannot succeed. Improvement is necessarily a process of learning by all those involved.

This does not mean, however, that each school should find its own way, or that there are no generalisable approaches to effective schooling. Quite the opposite; we know an increasing amount about effective teaching and learning and education systems should be working hard to make those practices and approaches universal in schools. But that cannot be done by fiat; it must be done through engagement – in just the same way as teachers cannot force students to learn, they can only create the conditions that make learning more likely through various forms of support, encouragement, and pressure – with much more of the former than the latter since we know that fear is a disincentive for learning ...

To do this across an entire education system requires a significant support infrastructure, which means enough skilled people to provide ongoing support to all schools and districts, and supporting elements such as professional development, data, and accountability aligned with system goals and strategies.

... [F]ar too many education reforms, based on conventional ideas about organization, have seen teachers as the equivalent of assembly line workers whose job is simply to follow instructions or, in some cases, as an opposition to be controlled through policy. This cannot work. Governments that belittled teachers may have reaped short-term political benefits but failed to create the conditions that could produce better outcomes for students. Motivated and committed people are by far the most important resource any human service organization has to dispose, so engagement must be a high priority. (p. 742)[4]

1. The Schools Workforce

1.1. Q: *What other features of the current schools workforce and its changing context are important from a policy perspective?*

The Issues Paper identifies the following as "salient features and trends" within the teaching workforce:

- *incidence of under and oversupply,*
- *rising age profile,*
- *increasing portion of teaching staff positions filled by women,*
- *shift in employment to the non-government sector,*
- *significantly unionised workforce,*
- *high number of qualified teachers not currently employed in schools,*
- *declining remuneration relative to many other professions,*
- *relatively flat pay scales,*

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[4] Levin, B., (2010a). *Governments and education reform: some lessons from the last 50 years*, Journal of Education Policy, 25: 6, 739 – 747.

- *relatively uniform staffing mixes,*
- *shifting community expectations of the teaching workforce.*

Very little data, research or other evidence or even discussion is provided about the role and components of the schools workforce other than teaching. Although the Terms of Reference acknowledge these occupations or functions as supportive of the practice of teaching, it is disappointing more attention is not given to the crucial roles these other occupations play.

Many of these 'salient features and trends' within the schools workforce are taken up below under more specific subject headings.

From a policy perspective, one key feature that requires closer examination is the interface between the regulatory arrangements concerning the early childhood, the schools and the VET workforce and in particular the initial teacher and other education worker education and qualification requirements, the professional standards and registration requirements and the factors affecting mobility between the different sectors.

The AEU has a firm view that it is a fundamental expectation of the Australian community that students, whether of pre-school, school or post-compulsory school age, have the right to be cared for, taught and administered by staff who are appropriately qualified and trained.

The AEU notes the significant work already approved with respect to the teaching sector of the schools workforce that has established nationally agreed professional standards for teachers, and now principals, as well as the standards and procedures for the accreditation of initial teacher education programs in Australia.[5]

The same level of development is not yet achieved with respect to the same sorts of standards concerning teachers and teacher education programs in relation to pre-school education and to post-compulsory school education in VET programs. There are some exceptions, such as in Tasmania, where teachers in the Tasmanian Polytechnic are required to be registered. This exception emphasises the 'overlap at the boundaries' where, within schools, there is no discrete or separate Early Childhood, Schools and VET teaching workforces.

In the pre-school area for example, while all governments have given committed themselves to the requirement that all pre-school age children shall have a minimum of 15 hours per week 40 weeks per year education in the year before commencing school delivered by a four-year, university-trained early childhood teacher, and a National Quality Framework is being developed, the development of professional standards for such teachers and the requirements of their initial teacher education programs is yet to be worked through.

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[5] See Australian Institute of Teaching and School Leadership, *'National Professional Standards for Teachers'* (February 2011), and for *Principals* (July 2011) and *'Accreditation of Initial Teacher Education Programs in Australia – Standards and Procedures'* (April 2011).

Similarly, in the area of post-compulsory school education, for example, in the VET in Schools programs where students study for both a senior secondary school certificate and a vocational educational and training certificate, the formal education and training requirements for school teaching staff who deliver such VET programs remain largely problematic. From a policy perspective, critical here is the interface between the 'standards' requirements for teaching staff under each jurisdiction's teacher registration regulatory authority and under the standards and procedures developed by the Australian Institute of Teaching and School Leadership [AITSL] and those required for staff under the Australian Quality Training Framework who train and assess in VET certificate programs.

For non teaching staff, the situation is even more problematic with virtually no national agreement on standards for education and training requirements.[6]

In terms of the goal of improving student outcomes – itself a problematic term which will be examined below – this lack of nationally agreed standards for teachers and other education workers, including for their initial training, at the interface between pre-school, school and post-compulsory school education risks jeopardising achievement of the goal. Further the lack of such standards risks creating barriers to labour market mobility between the sectors as workers are unlikely to 'migrate' to sectors of education and training for which they are not qualified and trained.

2. Student Outcomes

2.1. Q: *What does the available evidence indicate about Australia's education outcomes? How policy relevant are comparisons of literacy and numeracy over time and across countries?*

2.2. Q: *Which avenues for reform are most promising for reducing educational disadvantage and improving education outcomes more generally? How important are workforce-related changes relative to other initiatives directed at enhancing children's learning potential?*

It should be acknowledged that the concept of 'student outcome' or 'education outcome' is itself problematic. Firstly, it can have a range of meanings. It ranges across issues such as student attendance and retention rates, academic achievement in one or more subject or skill areas through to issues such as personal or ethical values, sense of fulfilment and well-being, interpersonal or social relationships and various types of participation in and contributions to school and general community life. The evidence all too often, even virtually exclusively, concentrates upon only those issues which are most readily available to research, typically test scores on a narrow range of content areas.

Secondly, where the focus is on test results as outcomes, the available evidence about these outcomes in Australia is vast, problematic and highly contentious. There are the continuous test results and professional judgements or assessments by

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[6] The exception is in the pre-school area where there is to be implemented, progressively from 1 January 2014 a requirement that education assistance staff must have or be working towards a Certificate 3 level early childhood education and care qualification or equivalent.

teachers of their students. There are longitudinal and other surveys of student achievement conducted by professional measurement and assessment authorities such as the Australian Council for Education Research [ACER] or the National Centre for Vocational Education and Training [NCVER]. There is the large scale testing programme, the National Assessment Program: Literacy and Numeracy [NAPLAN], conducted by the Australian Curriculum, Assessment and Reporting Authority [ACARA] and a host of academic research projects and analytical papers attempting to correlate student outcomes as variously measured with measures of issues such as teacher characteristics, including education levels & training certification, student disadvantage or geographic isolation as well as labour market outcomes. There are also large scale international programs of student assessment conducted by organisations such as the OECD for the Programme of International Student Assessment [PISA] or the International Association for the Evaluation of Educational Achievement [IEA] for the Trends in International Mathematics and Science Survey [TIMSS].

The AEU stresses that the available evidence from these larger scale assessment programs needs to be treated with caution. Standard errors associated with such measurement programs are such that, although at the aggregate level, conclusions may be drawn about a system's performance, little useful data is available from them to draw conclusions about the performance of schools, students or the workforce. Programs such as these therefore are in reality measures of systems' performances rather than of student or workforce performance.

PISA

PISA 2009 shows that Australian 15yr olds performance in reading, mathematics, science and now computer literacy skills is statistically significantly above the OECD average and has been so since 2000. It also shows that performance in reading and mathematics has dropped slightly although science performance has remained the same. The drop in performance is not statistically significant.[7]

Importantly, PISA 2009 shows that the gap in performance between Australian 15 yr olds from high and low socio-economic backgrounds (SES) is statistically significant (ie, those from high socio-economic backgrounds perform better) and that it is only one of some 10 OECD countries where this is so.[8] Australia is a country of 'lower quality or equity' in this regard.

The ACER analysed the implications of Australia's performance in reading literacy according to SES background in the following terms:

> *The gap between students in the highest and lowest socioeconomic quartile is equivalent to more than one proficiency level or almost three full years of schooling.*[9]

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[7] OECD (2010d), *PISA 2009 Results*, Vol 5, Tables V.2.1, V.3.1, V.3.4 & Vol 6, Table VI.A

[8] OECD (2010c) *PISA 2009 Results: Executive Summary*, Figure II

[9] ACER, (2010a), *PISA in Brief: Challenges for Australian Education Results from PISA 2009*, p.13.

Notwithstanding the ACER analysis of the performance of each school sector (government, Catholic, independent) which found that once scores were adjusted for SES background there were no statistically significant differences in reading, mathematical and scientific literacy scores of students in the different school sectors,[10] the performance gap is of particular concern for teachers in public schools because of the SES composition of these schools. PISA 2009 data illustrates the difference in peer groups of students in government, Catholic and independent schools. Government schools have 35% of students in the lowest SES quartile and 16% in the highest quartile, Catholic schools have 16% in the lowest quartile and 30% in the highest quartile and independent schools have 10% in the lowest quartile and 50% in the highest quartile.[11]

TIMSS

TIMSS 2007 shows that in mathematics Australia's 4th grade students perform higher and its 8th grade students perform lower than the TIMSS average and that this is a statistically significant trend evident over the period 1995-2007.[12] In science performance, however both 4th and 8th grade Australian students perform better than the TIMSS average and that this trend has been evident over the period 1995-2007.[13] TIMSS's correlation between performance and measures of socio-economic disadvantage (ie, the proportion of students receiving federally funded supplementation of lunch meals) is not particularly relevant in the Australian context.

NAPLAN

NAPLAN shows that, for Australia as a whole, the proportion of student in Yrs 3 & 5 who achieve at or above the National Minimum Standard in the various domains of literacy and numeracy over the period 2008-2010 is generally at or above the 90th percentile. Although there is a slight decrease in these performances at years 7 & 9 level to at or above the 85th percentile.[14]

Summary of Student Test Outcome Evidence

What this evidence shows is that the overwhelming majority of Australian students have high academic outcomes from their schooling. There are however unacceptably high numbers of students (about 10% - 20%) who only achieve minimum standards, and that this is related to socio-economic background. Of Australian students who are disadvantaged, the OECD, using *PISA 2006* Science data, concluded that close to half exceeded the international comparable benchmark.[15] This means that more than half are either at or below such a benchmark.

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[10] ACER, (2010a), *PISA in Brief: Challenges for Australian Education Results from PISA 2009*, p.12.
[11] ACER, (2010b), *Disadvantage in Australian Schools*.
[12] Gonzales et al (2008), *Highlights from TIMSS 2007*, Tables 3 & 4.
[13] Gonzales et al (2008), ibid, Tables 11 & 12
[14] MCEECDYA (2010), *NAPLAN Summary Report 2010*, Tables 9a and 9b
[15] OECD, (2011b), *Against the Odds: Disadvantaged Students Who Succeed in School*, p11.

The former OECD Director of Education and now ACARA chair, Professor Barry McGaw (2007) in analysing *PISA* 2000 & 2006 results, describes Australia as doing very well in such international comparisons. However, the main issue and challenge that such tests identified was this large gap between high performing and low performing students which correlated to the relative levels of social economic disadvantage.[16]

The AEU is pleased to note the explicit commitment of the State and Federal Governments to educational equity in the <u>Melbourne Declaration on Educational Goals for Young Australians</u>. Unfortunately, as noted in the AEU *Submission to the Commonwealth Government's Review of Funding for Schooling*, current schools funding mechanisms exacerbate social inequality.[17]

Student Outcomes and Labour Market Outcomes

The available evidence suggests a significantly positive correlation between higher student outcomes and better labour market outcomes.

Shomos (2010) uses the construct of 'functional' literacy and numeracy and data from the Australian Bureau of Statistics' *Adult Literacy and Life Skills Survey* to conclude that education has a positive effect on labour market participation and wages and that if literacy and numeracy skills are improved so too will labour market outcomes.[18]

Ryan (2011) uses data from the *Longitudinal Surveys of Australian Youth* [LSAY] and finds a widespread but modest effect from the completion of Yr 12 for young Australians who do not proceed immediately to further study. The effect is similar for apprenticeship completions for males and traineeship completions for females but the effect is not evident from completion of VET qualification at certificate level 2 and 3. The effect consists of better full-time employment rates, lower incidence of unemployment, higher wages and higher status jobs.[19]

Fitzpatrick et al (2011), also using LSAY data, find that post-school qualifications, be they university or VET (Cert 3 or higher), were better for finding work more quickly followed by Yr 12 completions with early school leavers being the least able to find work quickly.[20]

This correlation between level of educational achievement and labour market outcome is especially pertinent in times of economic downturn. Young people (15-19 year-olds) are more likely to bear the brunt of any downturn in full time employment and a disproportionate share of the increase in unemployment.[21]

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[16] McGaw, (2007), *Presentation to 2007 Queensland Secondary Principals Association Conference*
[17] AEU, (2011), *Submission to Australian Government Review of Funding for Schooling*.
[18] Shomos, (2010), *Links between Literacy and Numeracy Skills and Labour Market Outcomes*, p58. Strictly speaking this analysis deals with the educational levels of adults (those with YR 11 or lower, those with Yr 12, those with a Diploma or Certificate and those with a Degree or higher) and is not comparable with school student outcomes.
[19] Ryan, (2011), *Yr 12 completion and Youth Transitions*, p8 and Tables, 6, 7 and 9.
[20] Fitzpatrick et al (2011), *From Education to Employment: How Long Does It Take?* p7.
[21] Anlezark, A., (2011), *Young People in an Economic Downturn*, p1.

Teacher Characteristics and Student Outcomes

Teacher characteristics ['teacher quality'] is a composite construct involving both readily measurable features such as qualifications, teaching experience and indicators of academic ability and subject matter knowledge and harder to measure features like ability to convey ideas in clear and convincing ways, capacity to create effective learning environments for different students, enthusiasm and creativity and effective collaborative working relationships with students, colleagues and parents.

Nonetheless, an OECD research report on teaching in 2005 which covered some 25 countries, including Australia, concluded that the research evidence showed there was generally a positive relationship between the easily measurable indicators of teacher quality and the easily measurable indicators of student performance (ie, test scores). That conclusion needs to be put into a context which the OECD report itself acknowledges: the most solidly based research finding is that the single largest source of variation in student learning concerns the differences in what the student brings to school – their abilities, attitudes, family and community background. This factor however was considered less amenable to influence by policy makers, at least in the short term, than was the issue of teacher quality.[22]

Measuring the causal relationship between teacher quality (and other inputs) and student achievement is difficult. Miller (2003) using USA data from 3 states has concluded that school level factors accounted for 7%, teacher level factors for 13% and student level factors (home environment, ability and motivation) for 80% of the variance in student achievement.[23]

Moreover, Rothstein (2007) has shown that simplistic value added models which suggest a direct causal relationship between teacher quality and student achievement are inherently statistically biased and an unsuitable basis for evidence-based policy development in areas such as school or teacher accountability and reward programs. For instance, numerous decisions are made about grouping students and assigning them to teachers (non-random assignment) and current student high achievement may be connected to previous excellent teachers rather the current teacher (lagged effects).[24]

International evidence on the correlation, as distinct from causal connection, between teacher quality and student achievement is generally consistent with the OECD *Teachers Matter* report.

Darling-Hammond (2000) summarising United States research concludes that the percentage of teachers with full certification (teacher registration or accreditation in Australian terms) and a major in the field (ie, a particular content area of teaching methodology) is a more powerful predictor of student achievement than teachers' other education levels (ie, a bachelor or master's level degree in a

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[22] OECD (2005), *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, p2.
[23] Miller, K. (2003), *School, Teacher and Leadership Impacts on Student Achievement*, p1.
[24] Rothstein, J. (2007), *Do Value-Added Models Add Value? Tracking, Fixed Effects and Causal Inference*, pp1,2 & 32.

particular subject area).[25] The United States National Council for Accreditation of Teacher Education in a summary of key research findings on teacher preparation found, amongst other things, that high quality teacher preparation resulted in stronger learning gains for students and that high standards for teacher preparation in leading industrialised nations lead to high student achievement.[26]

Lastly a wide range of studies [for example, Laczko-Kerr & Berliner (2002), Lubienski et al (2008), Easton-Brooks & Davis (2009) and Heilig & Jez (2010)] have specifically compared student achievement with precise teacher training (certification in US terms and registration or accreditation in Australian terms). They all conclude that students taught by uncertificated (unregistered/unaccredited) teachers have poorer student outcomes when compared to students taught by fully certificated teachers.[27]

The AEU attaches at Appendix 2 a selected, annotated bibliography concerning the research about the relationship between teacher qualifications and student achievement.

Reducing Educational Disadvantage and Workforce related Change

Dominant paradigms in education research over the 1970s-1990s, most notably epitomised in the work of the American economist Hanushek[28], tended to conclude that there was little significant correlation between educational inputs (school expenditures) and educational outputs (student performance).[29]Such research tended to influence policy makers, if not to reduce total expenditure per se, at least to reduce the rate of increase in educational expenditures especially as a proportion of GDP.

Those paradigms are no longer sustainable[30]. Not only has the research been revisited and subjected to more modern, and sophisticated analyses, but it directly conflicts with the more modern research in *PISA* and on *Teacher Characteristics* outlined above which has concluded that there are undeniable gaps in achievement dependent upon socio-economic status and that increased expenditures on educational inputs such as per pupil expenditures (PPE), teacher quality, smaller

[25] Darling-Hammond. L. (2000). *Teacher Quality and Student Achievement: A Review of State Policy Evidence*. p38.
[26] NCATE (no date), *What Makes an Effective Teacher: A Summary of Key Research Findings on Teacher Preparation*, pp 9-12.
[27] Laczko-Kerr & Berliner, (2002). *The Effectiveness of 'Teach for America' and Other Under-Certified Teachers on Student Academic Achievement: A Case of Harmful Public Policy*, p1; Lubienski et al (2008), *Achievement Differences and School Types: The Role of School Type. Teacher Certification and Instruction*, p 132; Easton-Brooks & Davis, (2009) *Teacher Qualification and the Achievement Gap in Early Primary Grades*, p10; Heilig & Jez, (2010), *Teach for America: A Review of the Evidence*, pp12-13.
[28] In Australia, Hanushek's approach has been adopted most notably by Leigh and Ryan (2006). This work has been critiqued by Zyngier (2009) and Job et al (2010).
[29] See for example, E.A. Hanushek, various studies, cited in Hedges et al (1994), *An Exchange: Part 1: Does Money Matter? A Meta-Analysis of the Effects of Differential School Inputs on Student Outcomes, p6*
[30] Indeed, the OECD, (2011b), *Against the Odds: Disadvantaged Students Who Succeed in School*, p14 quotes recent research by Hanushek, Rivkin and others which show that such school level factors do influence student outcomes.

schools and smaller class sizes all show strong and consistent positive relationships with student achievements. [31]

One remedy may involve advocating a significant redistribution of financial and social capital away from high to low areas of socio-economic status. The OECD *Teachers Matter* report noted that such status was the key determinant of educational outcome; however the approach which was less amenable to influence by policy makers. The research evidence supports an approach which would see increased targeted expenditures in areas of educational disadvantage (be they rural and remote communities, indigenous students and other students from culturally and linguistically diverse backgrounds and students with disabilities or from low socio-economic backgrounds) including increased resourcing to the schools and the workforce which services those students, especially in the pre-service and in-service training and ongoing development of teachers.

This is not an argument for simply, or only, increasing overall systemic expenditure per se or even of increasing overall expenditures on schools with particular characteristics. It is an argument for increasing expenditures on specifically targeted, recurrent or continuing and systemic programs which have been shown to work. In other words, it is a matter BOTH of more money being spent AND of how that additional money is spent.

Furthermore, any approach which constrains, reduces or fails to increase significant expenditures for systemic approaches on teacher training and professional development is inconsistent with the findings for and conclusions from the 2011 International Summit on the Teaching Profession, a symposium of *PISA* high performing countries.[32]

It is an important policy consideration when targeting expenditures to programs addressing low socio-economic disadvantage, that accurate measures of such status be developed and adopted. At least one recent Australian research study of Australian youth has concluded that current measures, largely based on indexes of geographic measures which work well at aggregate levels, tend to misclassify socio-economic status at the individual level.[33]

Consequently the critical issue for policy is choice of the right drivers for whole system change. Using current US and Australian policy initiatives, Fullan (2011) identifies as 'wrong' four drivers of change which will not work and four 'right' drivers of change that will work. The wrong drivers are: accountability, individual teacher and leader quality, technology and fragmented strategies. The 'right' drivers are: central focus on learning and instruction, social capital to build the profession, pedagogy that matches technology and systemic synergy. According to Fullan (2011), the objectives of current US and Australian education policy

[31] See Hedges, ibid; Greenwald et al (1996), *The Effect of School Resources on Student Achievement*, p384
[32] OECD (2011a) *Building a High Quality Teaching Profession – Lessons from Around the World* and; Stewart, V.,(2011), *Improving Teacher Quality around the World: The International Summit on the Teaching Profession*
[33] Lim, P. And Gemici.(2011), *Measuring the Socio-economic status of Australian Youth*, pp 7, 24.

initiatives – ambitious and admirable as they are – will simply not be met as they utilize the wrong drivers. No successful system has ever led with such drivers.[34]

Case studies of the difference such an approach of increased specifically targeted systematic expenditures can make in turning around student outcomes (attendance and retention rates, student behaviours and academic results) in disadvantaged communities can be found in government schools 'regeneration projects' in Melbourne's northern suburbs and in the Fair Go Project in Sydney's western suburbs.[35]

3. Workforce Issues

3.1. Q: *What are the strengths and weaknesses of current workforce arrangements? What are the priority areas for policy attention?*

3.2. Q: *Are major changes required to address shortcomings, or would gains be better achieved through fine-tuning of existing policy settings?*

The AEU will address specific detail in relation to workforce issues in sections 4-7 below.

At the more general level of policy, the critical issue with respect to workforce planning is commitment from all jurisdictions to deliver world class workforce planning and development. The best means of doing this may be through an appropriate body with a 'national remit' to not only collect data concerning supply and demand but to establish targets for particular areas of high demand and strategies to meet them. Such a body would need to be accountable to the Council of Australian Governments [COAG] or to the relevant standing committee or council of education ministers.

As noted above, the AEU supports in principle the significant work already undertaken by the Ministerial Council for Education, Early Childhood Development and Youth Affairs [MCEECDYA] and the Australian Institute for Teaching and School Leadership [AITSL] in developing and endorsing a nationally agreed, standards-based approach for professional standards for teachers and principals and for the accreditation of initial teacher education programs.[36]

These standards are designed in part to increase entry level academic standards for initial teacher education courses and to encourage such courses to equip teachers with the abilities required to cater for the full range of students including those cohorts with special needs and/or identified educational disadvantages such as indigenous students and students with disability.

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[34] Fullan (2011), *Choosing the Wrong Drivers for Whole System Change*, Centre for Strategic Education, Seminar Series 204, Melbourne, pp 5,7,17.

[35] For success of the northern Melbourne suburb experience, see Milburn, C., *Radical Surgery Saves Colleges on the Brink*, The Age, 27 June 2011, p 17. For Sydney's Fair Go Project, see Munns, G.(2008), "Teachers For a Fair Go", Conference Paper, Australian Association for Research in Education, 2008 Conference.

[36] See fn 5 above.

Such developments, although confined to the broader school teaching workforce, are significant steps in the right direction but they need to be further supplemented and complemented by coordinated effort by all jurisdictions and stakeholders to establish easily accessible, well constructed, maintained and resourced public schools staffed by highly trained and high calibre teaching and other professional, and administrative support personnel in order to achieve the declared educational goals for all young Australians that:

- *Australian schooling promotes equity and excellence; and*

- *All young Australians become successful learners, confident and creative individuals and active and informed citizens.*[37]

The AEU further emphases that without such coordinated effort in enhancing workforce planning and development, the targets for student educational achievement established by the COAG are unlikely to be met.

The COAG Reform Council [CRC] report on the performance of the National Education Agreement indicates there has been no change in the Yr 12 or equivalent attainment rates between 2008-2009 (ie, the rate is still 5.5 percentage points below the target of 90% by 2015) and that achievement levels in literacy and numeracy were varied with literacy improvements in the primary and not secondary years and numeracy level improvement generally restricted to Year 5.[38] A similar CRC report on the performance of the National Partnership Agreement on Literacy and Numeracy noted that the literacy and numeracy targets are established by bi-lateral agreement and do not measure each jurisdiction's ambition in achievement improvement nor do the results enable jurisdictional comparisons.[39]

This worrying trend of not meeting significant targets is reinforced by more recent ABS statistics. In 2010, there is still no increase in the Yr 12 or equivalent attainment levels for the 20-24 year old target group set by COAG – the proportion remaining at around the 85% mark. Although, the Victorian Education Department, quoting an ABS, *Survey of Education and Work* has a Year 12 or equivalent (AQF Level 2) attainment rate of 85.6% (up from 84.5% in 2009). Over the 5 year period from 2006 - 2010 the rate went up by 3.7% (from 81.9%) and over a 10 year period from 2001 by 6.5% (from 79.1%).[40]

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[37] Ministerial Council on Education, Employment, Training and Youth Affairs (2008), *Melbourne Declaration on Educational Goals for Young Australians*, Canberra, p7.
[38] CRC, (2010), *National Education Agreement: Report on Performance 2009*, pp xvi, xix. The report does note significant improvements in achievement of students of low socio-economic status (measured by parental education level) and in indigenous student participation in testing and in their achievement.
[39] CRC, (2011), *National Partnership Agreement on Literacy and Numeracy: Performance report for 2010*, pp xv-xvi.
[40] DEECD (Vic), (2011), *Summary Statistics for Victorian Government Schools*, p2. Part of the explanation for the difference between CRC and DEECD figures is the different measures of Yr 12 or equivalent, ie, AQF Level 2 or 3, as well as the dates for the various figures (February vs August enrolment figures).

Also of concern is the comparative stagnation in apparent retention rates – the proportion of Year 7/8 students who continue to Yr 12. This has remained at around the 75% mark (but with a new peak at 78% for 2010) since the early 1990s.[41] Again, all Australian government school retention rates at August, 2010 were 73.1% while the all schools' figure (including the non-government) was 78%.[42]

4. Balancing Supply and Demand

4.1. Q: *What are the key factors, whether across the board or specific to particular areas, that may contribute to current or future workforce shortages? Are all of these factors amenable to policy action?*

4.2. Q: *What is contributing to the ongoing surplus of workers (who have teaching qualifications) in some disciplines and locations? Are such surpluses a cause for concern?*

4.3. Q: *Are there weaknesses in specific recruitment and/or retention strategies that could be exacerbating imbalances in supply and demand? Are there any underlying problems in workforce planning strategies?*

4.4. Q: *What lessons, if any, can be learned from other sectors of the economy in dealing with the staffing challenges in the schools sector?*

Balancing supply and demand issues and predicting the requisite needs is notoriously difficult with respect to schools. It is compounded by a lack of publicly available and nationally consistent research data concerning teachers and even less for the other components of the school workforce. The data required on the teacher demand side has to cover the numbers of students and teachers per school, the age profile of teachers, the proportion on fixed term appointments, the levels of part-time employment, the levels of leave, attrition rates, supply difficulty trends (including subject areas and geographical locations) and projections of student enrolments and new teachers required to meet the projected demand. On the supply side, data is required about the numbers of students enrolled in teacher education courses, the types of courses they are enrolled in, the subject methodologies they offer, the historic and existing course attrition rates and projections about how many students in each type of course can be expected to become primary, secondary or special education teachers. Supply and demand issues go beyond recruitment (into initial training and then employment) and retention in employment to the 'deployment' of the requisite personnel to specific 'tasks' whether that be in particular schools, subject areas, geographic locations or with cohorts of students with particular needs such as indigenous students, students with disabilities or from low SES or culturally and linguistically diverse backgrounds.

Survey data from the AEU national survey report, *State of Our Schools*, indicate that that the majority of secondary schools have teaching staff working in subject areas for which they are not qualified with mathematics, technology, science, special education and physical education being the 'worst' areas in this respect. Similarly the majority of all schools reported difficulties in filling vacancies either

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[41] ABS Cat No: 4102, *Australian Social Trends March 2010: Yr 12 Attainment*, pp2-3.
[42] DEECD (Vic), (2011), op cit, p2.

because of a lack of suitable candidates or an inability to obtain relief teachers on a casual basis.[43]

One of the difficulties in trying to gauge the extent of any perceived problems with shortages or oversupply, even with respect to the data that is available, is the lack of consistent definition of what is being measured. The ACER for example use a measure of 'unfilled vacancy' as at the beginning and near end of a school year and a measure of 're-advertised vacancy'. Its 2008 publication, *Staff in Australia Schools 2007,* indicates that in 2006 some 10% of primary school principals reported unfilled vacancies with 5% reporting the need to readvertise. This equates, nationally, to approximately 1300 unfilled primary school General Classroom teacher vacancies in 2006. For secondary schools, the same survey reported the main unfilled vacancies as mathematics (400), Science (300), English (200) and LOTE & Society and Environment Studies (150).[44]

The Victorian Education department refers to 'difficult to fill vacancies' in its annual teacher supply and demand report but does not provide a definition of "difficult to fill" in the report. Over the period 2001-2009 the percentage of all government schools (primary, secondary and special) experiencing such difficulties fluctuated between 29% and 15%. Over the same period the most difficult to fill subject areas (maths, technology and LOTE) and geographic areas remained constant.[45]

The AEU is not aware of any other Australian education authority that collects, collates and publishes relatively comprehensive data in the manner of the Victorian *Teacher Supply and Demand Report.* This supports the need for an appropriate body to nationally coordinate these critical workforce planning and development data needs.

What is known from these data sources is that a multi-faceted problem exists:

(a)   the further away from metropolitan and larger provincial centres, the greater the difficulties of balancing supply and demand;

(b)   greater difficulties persist in critical curriculum areas, predominantly at the secondary level and especially in mathematics, science, technology, LOTE, indigenous education and special education; and

(c)   greater difficulty persists in regions or communities of low socio-economic status, including especially, indigenous communities.

Numerous teacher supply enhancement schemes and strategies exist across the various jurisdictions. However, there is little substantive data publically available evaluating their effectiveness. Financial assistance with student 'HECS' fees, scholarships and other financial incentives exist to recruit new employees, enable existing employees to re-train in particular curriculum areas or to re-locate or stay

[43] Australian Education Union, *State of Our Schools Survey,* 2008 & 2009. (electronic copy)
[44] See McKenzie et al (2008), pp108, 110. The 2010 survey report is not yet published.
[45] DEECD (2010), *Teacher Supply and Demand Report 2009.* pp 56-57.

in rural and remote areas.[46] Industrial regulatory instruments typically provide monetary allowances and travel and accommodation assistance for employees to relocate or travel to remote areas. There are also programs which assist mature age workers from other industries to re-train and enter the schools workforce in areas of high demand.

There will always be room for argument about how effective such programs, necessary as they are, will be. The fact that such problems continue, suggest the programs tend to be ad hoc or piecemeal 'plug the gap' schemes and aimed at fixing problems when they arise rather than constituting longer term preventative solutions or strategies.

Strategies that other industries have adopted to deal with labour market or other skills shortage issues are not pertinent to the schools sector. Rather than reflect strategies of substantial investment in training a domestic, skilled workforce, such strategies have tended to 'buy-in' skilled labour as needed on a permanent or temporary basis whether from external or international markets or elsewhere in the national labour market, even adopting measures such as to 'fly-in/fly-out' a rotating roster workforce. Such strategies have not been particularly effective in addressing those industries' skills shortage needs.

Such strategies have also not worked in the schools sector. Teaching, for example, has long been a skilled occupation included on the various lists for either permanent migration or long or short stay work visa programs maintained by the Commonwealth's immigration department.[47] These strategies also create international equity problems for Australia by removing skilled labour from emerging and developing economies and depriving those markets of much needed skilled labour. Similar arguments operate for the national labour markets in teaching.

It is also not a realistic alternative to expect significantly increased labour mobility from within the existing workforce as a strategy to balance out supply and demand problems. Data on teacher mobility from the ACER indicates mobility tends to be within rather than across state or territory jurisdictions, from rural and remote towards metropolitan and from government towards non-government schools with the overwhelmingly predominant reason for movement being to obtain a more convenient school location or preferred school ethos and values.[48] Such data deal with motivations of those who are already in the teaching workforce and do not address the motivations of those who 'decline' to become teachers. Lack of professional pay and working conditions could be a major disincentive in teacher recruitment and retention.

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[46] eg, see DEECD (Victoria) Teacher Supply and Demand Initiatives at: http://www.education.vic.gov.au/hrweb/careers/teach/demand.htm

[47] Interestingly, the Commonwealth includes generalist primary teaching on its list for business (long stay) or s457 visas but not on its list for general skilled migration visas. All other grades of teacher, including Principals, are on both lists.

[48] McKenzie et al, (2008), op cit, pp 65-67.

Strategies which have worked as longer term solutions are available from the experience of high performing countries in the OECD's *PISA* programme:

- Strong, sustained nation-wide communications and public relations campaigns to develop positive images of schools and their teachers, especially as highly regarded and rewarded professionals;

- early identification of and financial support for high quality candidates for teacher training – often at secondary school or early university level through the provision of scholarships, cadetships, studentships and internships;

- empowering teachers to act as developers and drivers of continuous improvement rather than as implementers of change dictated by government policy;

- increased professional autonomy and responsibility over the curriculum and student assessment;

- significant financial and other support for ongoing professional development and performance appraisal; and

- professional standards of employment which includes significant reward (both monetary and non-monetary) and working conditions enabling greater scope to concentrate upon individual student learning needs, eg, through smaller class sizes and reduced instructional load time.[49]

5. Job Design and Innovation

5.1. Q: *Are the roles of and relationships between different school workers appropriate to meet current and emerging needs? In what ways might changes in job design be useful?*

5.2. Q: *Are there regulatory, institutional or cultural impediments to beneficial adjustments in job design and staffing mixes? To what extent do the national accreditation and registration requirements recognise changing professional demands for school workers?*

5.3. Q: *Does the current design of teaching roles give sufficient recognition to issues such as extra-curricular activities, interaction with parents and the community, or to assisting students with the transition to further education or employment?*

5.4. Q: *Would further decreases in student–teacher ratios significantly improve student outcomes? How should empirical research on the cost-effectiveness of class size reductions as a means to improve student outcomes be interpreted?*

5.5. Q: *Is there appropriate sharing of Australian and international experiences regarding changes to the role and mix of teachers, leaders, para-professionals, and other school workers?*

As the Productivity Commission's Issues Paper notes, the schools workforce comprises a diverse range of occupations: principals, teachers, specialist professional staff like librarians and student counsellors, a range of educational assistance and administrative and other support staff as well as allied health

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[49] See OECD (2011a), op cit, pp7-32 and Stewart, V (2011), op cit, pp 8-11, 15-16.

professionals such as nurses and speech pathologists. There are maintenance occupations and canteen staff.

The AEU does not think that job re-design per se of each and every such occupation is warranted. Rather some innovation with respect to the critical areas of school leadership, teaching and greater proliferation of a range of other professional staff is required in order to renew focus on the individual learning needs of each student.

Some of these areas, e.g., school leadership, are further developed below.

Teaching job design can be addressed by a renewed effort to reduce teaching hours in order to free up resources to increase preparation, training, research and collaborative cross-school project or team work. One example of collaborative team work to enhance the teacher's role is a greater use of other professional staff in developing learning diagnostic and learning development plans. Professional job design, and rewarding careers, requires greater professional responsibility rather than routine administrative or managerial tasks. While the centrality of classroom teachers in student learning processes should be recognised through the enhancement of their professional role, professional responsibility as such should be diversified across the team of teaching and other professional occupations.

The potential to improve student learning outcomes cannot be realised solely through teacher job re-design. New approaches to teaching and learning in the context of technological change and the greater use of on-line learning resources place pressure on many aspects of school organisation and operation such as age or grade cohort teaching, school timetabling, school classroom design, school facilities in general and the links between school and home. These issues all impinge on the capacity of teachers and other school professionals to address the present social and learning environment.

The single biggest regulatory, institutional or cultural barrier which constrains the development and deployment of the necessary resources, prevents the development of appropriate work practices by the professional and other occupations within the schools workforce and which ultimately negates the objective of enhancing student outcomes consists of government and other school system authorities' economic and social policies. This includes funding policies which:

- inadequately resource initial teacher education programs;

- devolve budgetary and administrative decision making to the school level. This increases the managerial, administrative, regulatory and compliance burden upon schools and directs productive capacity away from the core educational purpose of schools;

- increasingly direct financial resources towards advantaged and away from disadvantaged schools, their students and local communities;[50] and

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[50] See for example, Lamb, S. (2007). *School Reform and Inequality in Urban Australia: A Case of Residualising the Poor* in Teese, R., Lamb, S. & Duru-Bellat, M., (Eds.), (2007), *International Studies in Educational Inequality, Theory and Policy: Vol 3 - Inequality: Educational Theory and Public Policy*, pp1-38 and Teese, R. & Lamb, S., (2011), *Submission to the Review of Funding For Schooling*.

- wages policies which fail to provide staff within the schools workforce generally with adequate career and remuneration structures.

Rather than address the imperative for policy change in these areas, the evidence indicates that an increasing burden of work is being placed upon the schools workforce which is being required to do more with comparatively less than what is required. Such work intensification has implications for an already overcrowded curriculum as well as the already overloaded work requirements upon staff.[51]

Data developed by the ACER show that some 57% of full-time teachers spend between 45-60 hrs pw (average 48-49) on school activities with a similar proportion amongst school leaders (average 55-59).[52] ABS data show that student-teacher ratios are generally higher than the national average in government schools but lower in independent schools but with little change over the 2008-2009 period.[53]

Moreover, OECD research on disadvantaged student achievement shows that increased expenditure on school level inputs such as smaller class sizes, improved teacher quality (training levels) and peer group successes have a significant positive effect on student achievement.[54]

This available evidence suggests that something other than current policy approaches (of maintaining or increasing staff workload or of maintaining existing or increasing class sizes) is required if student outcomes and workforce productivity are to be improved.

Indeed the consistent survey evidence collected by the AEU shows significant job redesign of teaching roles is required to achieve greater improvement in student outcomes. That re-design would entail smaller class sizes, better access to professional development and new technologies, better school and classroom facilities and increased levels of support for programs to enhance literacy and numeracy and the needs of students with special learning difficulties.[55] Such job re-design will be important in increasing job satisfaction and so reducing attrition rates. The ACER has found that dissatisfaction with teaching and better opportunities outside of schools were key reasons behind intentions to resign prior to retirement for teachers at all stages of their careers and that more support staff, smaller class sizes, fewer student behavioural problems and a more positive public image would retain teachers in the profession.[56]

[51] Galton, M. & MacBeath, J., (2008), *Teachers under pressure*. Gardiner, C. & Williamson, J., (2004), *Workloads of government school teachers and allied educators in Tasmania*.
[52] McKenzie et al (2008), op cit, pp 44-45.
[53] ABS Cat 4220, p 11.
[54] OECD, (2011b), p 14.
[55] See AEU (2010), *State of Our Schools Survey Report*.
[56] See McKenzie et al, (2008), pp82-86, 98.

As an example of an innovative initial teacher education programme, the AEU attaches as Appendix 3 a description of the Kelvin Grove Teacher Education Centre of Excellence. The programme was developed in consultation with our Associated Body, the Queensland Teachers' Union. It is an example of an approach to improving teacher quality that is based firmly on research evidence about what works and puts engagement with the profession front and centre.

6. Training and Professional Development

6.1.   Q: *What are the advantages and disadvantages of the traditional Diploma and Bachelor of Education entry pathways? Do postgraduate studies in education contribute significantly to teacher quality?*

6.2.   Q: *How effectively do pre-service training courses (and the national accreditation standards for such courses) meet the current and prospective needs of the education system and teachers? Do courses place sufficient emphasis on practicum?*

6.3.   Q: *To what extent are employment-based pathways a complement to standard teaching courses? Are such pathways likely to be of a niche nature, or might they have wider applicability in the future?*

6.4.   Q: *Is sufficient attention paid to professional development - not only for classroom teachers, but also principals and other school workers? What specific changes, beyond those already in prospect, would be appropriate?*

6.5.   Q: *Are adequate resources available to mentor new teachers? Is there a need for formalised system-wide mentoring structures, or should the processes for inducting new teachers be left to each school?*

6.6.   Q: *What role do pre-service training providers play in directing aspiring teachers into areas of teacher shortage?*

6.7.   Q: *At what point (or points) in time should the quality of aspiring teachers be assessed: before pre-service training, before practicum, before entering the workforce as new teachers, or elsewhere in the training and development cycle? What scope is there to increase standards for entering courses, placements or the profession without exacerbating current or future shortages?*

The research evidence presented by the AEU above in the section on *Teacher Characteristics and Student Outcomes* is virtually unequivocal. There is a positive correlation between teacher training and student achievement. It is fully certificated teacher training per se rather prior education levels that is the critical or powerful predictor of student academic success. It is appropriate teacher training that meets the requirements for certification or registration by the teacher regulatory authorities that is important not whether that training occurs at 'end-on' Diploma, integrated Bachelor degree or postgraduate Masters Degree level.

The AEU recognises a range of different models exist for teacher training. These may range from 'end-on' postgraduate diplomas through integrated Bachelor degrees and 'professional' Master's degree programs. Of greater significance than these models is the support provided to the student teachers or trainees and the content of such courses. Teacher scholarship programs which provide a wage rather

than simply HECS fee payments would be particularly significant. Such programs were common in Australia until the 1980s and are currently used in 'high-performing' countries such as Singapore. So too would be increasing the clinical or 'on the job' or practicum component of all initial teacher education programs, including through employment-based 'internship' programs.

Absolutely critical in this endeavour is the engagement of the profession in its induction, mentoring and ongoing training and professional development needs. This will not be achieved through employer or institutional exhortations about professional responsibility or of mandatorily requiring existing staff to supervise and train new trainees but by recognising and rewarding through significant career structure enhancement this important role of teachers. The current compensation or reward scheme of small payments to teachers who either supervise student teachers or coordinate the work of other teachers who provide the supervision is wholly inadequate

Serious consideration needs to be given to the lessons learnt from so-called high performing countries as to what is required to achieve and maintain a high quality teaching profession. These lessons - the early identification and support of potential teachers (even at school age level), greater financial incentives during study/training, job re-design and substantial professional development oriented towards teacher and not system needs - have been canvassed in earlier sections of this submission.

7. Remuneration and Performance Evaluation

7.1. Q: *How important are the level and structure of remuneration for recruitment and retention of teachers? What impact does the level of remuneration have on the capabilities of those entering the teaching profession? Should differentiated remuneration be used more widely to address imbalances in supply and demand?*

7.2. Q: *Are there non-remuneration conditions of employment that, if changed, would enhance teacher quality and student outcomes? Is there sufficient recognition of the work associated with the delivery of extra-curricular programs?*

7.3. Q: *What makes a quality teacher? How should teacher performance be measured? To what extent can computable performance metrics indicate the 'value added' by a teacher?*

7.4. Q: *If a well-designed, performance-based pay scheme could be implemented, would it significantly enhance teacher quality and student outcomes? What risks and costs are associated with performance-based pay?*

7.5. Q: *Separate from whether financial rewards should be attached, are there ways to enhance performance appraisal processes for school workers?*

While there is Australian research which suggests that the motivation of teachers and school leaders for entering the profession has comparatively little to do with remuneration levels, somewhat more to do with working conditions and security of employment and most to do with intrinsic, 'altruistic' factors such as personal fulfilment, working with children or in particular subject areas and worthwhile social contribution, that research does not address the motivation of those who do

not become teachers in the first place for rejecting the profession as a career choice.[57]

OECD research, however, on what makes for a high quality teaching profession indicates that high status reflected in what might be called professional remuneration levels and professional working conditions is crucial in establishing and maintaining such a profession.[58]

It is for these very reasons that the AEU has advocated a *Professional Pay Proposal* which would see increased recurrent funding from Commonwealth and state/territory governments for an enhanced, highly remunerated 'professional standards referenced' career structure, over and above existing common incremental salary scales, negotiated by employers and unions and incorporated into industrial regulatory instruments.[59]

In this respect, the work of AITSL in developing national professional standards linked with the stages in a teacher's or principal's career is significant. Industrially, in terms of a professionally rewarding career structure, that work needs to be further realised by significant government contribution to teacher career enhancement through the accepted collective agreement wage-fixation processes.

However, restrictive government wages policies (almost universally set at around an increase of 2.5% pa) are constraining further development and failing to recognise the significant enhancement required and such market restraints are likely to flow to other 'non-government' sectors of the schools workforce due to the pace-setting or benchmarking role played by such policies. Not only will such policies negate the objective of achieving a high status, highly remunerated and high quality teaching profession, they continue to constrain the flexibilities within existing industrial regulations frameworks. For example, although all instruments act as minimum wage instruments, and all federal instruments must provide for individual flexibility and facilitation arrangements, without increased government finance they act in practice as actual wage and conditions instruments set at a level which remains inadequate.

The AEU, however, does not support the introduction of differentiated remuneration schemes if by that it is meant different annual salary levels dependent on the subject area, the types of students or the locality in which one works. Indeed, the Commonwealth Government's *Review of Teaching and Teacher Education* (2003) did not recommend the payment of differential salaries for teachers in difficult to staff curriculum areas or work locations but a range of other financial and associated incentives for this purpose.[60] A differentiated annual salary remuneration scheme pays no regard to any known mechanism for wage fixation such as work value and has no regard to any measure of productivity. The work, for example, of teachers of Maths, Science, Languages Other than English or in low

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[57] McKenzie et al (2008), pp 34-38.
[58] See OECD, (2005), pp3-7; OECD (2011a), pp8-13; Stewart (2011), pp10-11
[59] AEU (2010a), *Professional Pay and Quality Teaching for Australia's Future: The AEU Proposal.*
[60] Committee for the Review of Teaching and Teacher Education (2003), *Australia's Teachers: Australia's Future,* Main Report, p61.

socio-economic or rural and remote locations is of no more or less value or is more or less productive than that of their colleagues elsewhere.

As noted elsewhere in this submission, the AEU does support the use of a range of monetary and non-monetary incentive schemes to address the issues associated with the imbalances in supply and demand. However a note of caution needs to be added: the level and type of incentives needs to be such that they are effective to address the issue they are targeting (and the continuing problems suggests that those levels and types have not yet universally succeeded) but not so high as to change the teaching motivation from educational practice to monetary reward.

It is also important to note that individualised methods of setting pay are in Australia, whether in the public or private sector, a minority of all methods of setting pay (37%). Payment in accordance with an award or a collective agreement provides the major means of setting pay (69%).[61] It is the level of pay or remuneration within those instruments which is the issue.

All awards and industrial agreements covering Australian government school teachers provide for an incremental scale which recognises the increase in performance and value of a teacher's work over time. Sanctions ranging from withholding incremental payments, performance management and disciplinary procedures up to and including dismissal exist for teachers who are either under-performing or not performing at all. There are some variations between jurisdictions with respect to which increments are awarded according to meeting documented standards or some other mechanism of teacher annual review.[62]

When the literature speaks of performance-based pay, and this is reflected in the language of the Commission's Discussion Paper, it generally is not referring to the measure of performance reflected in work-value or associated wage-fixation principles or in the productivity bargain associated with collective agreement making but with notions of some additional performance or reward or 'bonus' payment in return for outcomes measured by student or school results or some other peer, school and/or community evaluation.

There is now an extensive research literature documenting the successive failure of attempts to link teacher pay to these latter notions of teacher performance or bonus pay schemes. Levin (2010b) identifies eight reasons why merit pay for teachers is a bad idea:

1. *Very few people anywhere in the labour force are paid on the basis of measured outcomes.*

2. *No other profession is paid on the basis of measured client outcomes.*

3. *Most teachers oppose such schemes.*

4. *Pay based on student achievement is highly likely to lead to displacement of other important education purposes and goals.*

5. *There is no consensus on what the measures of merit should be.*

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[61] ABS Cat No 63060, *Employee Earnings and Hours*, May 2010 (released in March 2011)
[62] See Ingvarson et al, (2008), *Research on Performance Pay for Teachers*, p41.

6. The measurement of merit in teaching inevitably involves a degree of error.

7. The details of merit pay schemes vary widely, yet these details have great impact on how such plans are received and their effects on teachers and schools.

8. Merit pay schemes in education have a long record of failure.[63]

Wu (2009 & 2010) has shown that large-scale assessment programs such as *PISA, TIMSS or NAPLAN* are inappropriate instruments for measuring individual school, student or teacher performances due to the significant effect of factors such as sampling, measurement and equating error and the large 'confidence intervals' associated with interpreting those results.[64] In other words, the fluctuations around any particular result are so significant, that the 'result' cannot be attributed with any degree of confidence to a particular student, school or teacher.[65] The same caution and advice against using such material to assess and reward schools and teachers due to these margins of error and inherent unreliability was provided to the Australian Government by ACARA, its own agency responsible for administering the testing programmes and publishing the results.[66]

Recent analyses of the experience of New York schools with teacher incentive bonuses linked to student achievement scores show that such schemes whether voluntary or mandatory, based on individual teacher or whole school performance do not lead to improved student outcomes and, in fact were so counter-productive as to lead, most recently, to the abandonment of the program.[67]

Attempts to link teacher evaluation to student test scores have been similarly unsuccessful:

> *[T]here is broad agreement among statisticians, psychometricians, and economists that student test scores alone are not sufficiently reliable and valid indicators of teacher effectiveness to be used in high-stakes personnel decisions, even when the most sophisticated statistical applications such as value-added modelling are employed.*

> *For a variety of reasons, analyses of VAM results have led researchers to doubt whether the methodology can accurately identify more and less effective teachers. VAM estimates have proven to be unstable across statistical models, years, and classes that teachers teach. One study found that across five large urban districts, among teachers who were ranked in the top 20% of effectiveness in the first year, fewer than a third were in that top group the next year, and another third moved all the way down to the bottom 40%. Another found that teachers' effectiveness ratings in one year could only*

[63] Levin. B. (2010b) *Eight Reasons Merit Pay for Teachers is a Bad Idea.*
[64] Wu, M., (2009a), *Keynote Address to the Pacific Rim Objective Measurement Symposium;* (2010), *Inadequacies of NAPLAN Results for Measuring School Performance.*
[65] Wu (2009b), *Interpreting NAPLAN Results for the Lay Person.*
[66] Harrison, D., (2011), *Agency behind MySchool Warned Against Data Use,* The Age, 7 May 2011, p5.
[67] Fryer, R.G.,(2011), *Teacher Incentives and Student Achievement: Evidence from New York City Public Schools,* pp2-6; Marsh et al (2011), *A Big Apple for Educators: New York City's Experiment with Schoolwide Performance Bonuses – Final Evaluation Report,* pp xx-xxvi; Otterman, S, *New York City Abandons Teacher Bonus Program,* The New York Times, 17 July 2011.

predict from 4% to 16% of the variation in such ratings in the following year. Thus, a teacher who appears to be very ineffective in one year might have a dramatically different result the following year. The same dramatic fluctuations were found for teachers ranked at the bottom in the first year of analysis. This runs counter to most people's notions that the true quality of a teacher is likely to change very little over time and raises questions about whether what is measured is largely a "teacher effect" or the effect of a wide variety of other factors.[68]

Federal, state or territory government experimentation and policy initiatives on this issue simply can't be supported on the evidence.

This is not to say that performance review or evaluation, as distinct from performance bonus pay, schemes are not to be supported. Indeed the evidence, both internationally and within Australia, is that the profession will support teacher appraisal schemes providing they are well-resourced, enable further training and professional development linked to teachers' professional goals and are properly negotiated between employers and teacher unions. System-imposed administrative exercises that provide little useful feedback are not endorsed by either the profession or the AEU.[69]

In this respect, again, the *National Professional Standards for Teachers* and for *Principals* have the potential to spark a renovation in remuneration and performance evaluation schemes for the schools workforce. However, it would appear this potential is limited due to the constraints imposed by state/territory government wages policy and the inadequacy of commonwealth government funding support. The AEU is aware of several current attempts by state/territory government education departments to simply replace elements of existing classification structures and standards with those in the above national standards. Such a ham fisted approach will not be effective in increasing remuneration, improving teacher quality and ultimately improving student outcomes.

A most recent OECD report, *Reviews of Evaluation and Assessment: Australia*, has made a number of policy recommendations:

- *The alignment of teaching standards with a competency-based career structure;*

- *Teacher registration conceived as career-progression evaluation;*

- *Developmental evaluation performed through teacher appraisal as part of performance management, internal to the school, for which the school principal would be held accountable;*

- *Links between developmental evaluation and career-progression evaluation.*

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[68] Baker, E et al. (2010) *Problems with the use of student test scores to evaluate teachers*. (The authors include four former presidents of the American Educational Research Association. A former chair of the National Research Council's Board on testing and assessment, a former chair of the committee on methodology of the National Assessment Governing Board, a former associate director of the National Assessment of Educational progress and a former chair of the National Council on Measurement in Education.)
[69] OECD (2009a), *Creating Effective Teaching and Learning Environments: First Results from TALIS*, ch 5; OECD (2011c), *Reviews of Evaluation and Assessment: Australia*, ch 4; Jensen, B., (2011), *Better Teacher Appraisal and Feedback: Improving Performance*, pp22-23.

Not only do these recommendations resemble elements of the AEU *Professional Pay* proposal, the OECD goes to some lengths to point out that its 'career-progression evaluation' system is not a performance-based pay or performance bonus model which, it says, the research literature notes as producing only mixed results.[70] Noteworthy, too, is the absence of any reference to quotas or limited tenure or fixed term appointments in these OECD policy recommendations; such features being common in employer proposals for teacher and principal career restructures.

This latest OECD report also notes that few countries use student test results in evaluating teacher performance. While teachers must provide evidence to demonstrate student progress, student test scores or 'value-added models' provide little reliability as a measure of teacher performance.[71]

8. School Leadership

8.1. Q: *Has sufficient policy attention been paid to school leadership and its contribution to education outcomes?*

8.2. Q: *What motivates teachers to become school leaders? Is enough being done to identify current and future leaders?*

8.3. Q: *What skills do school leaders require beyond those acquired as teachers? Is enough being doing to facilitate leaders' acquisition and development of ancillary skills? Do principals necessarily require a teaching background?*

8.4. Q: *In an environment of greater autonomy for schools, how is the role of the principal likely to change? To what extent do changes in job design for school leaders have feed-through effects to other members of the schools workforce?*

School leaders are primarily educationalists managing and driving the educational performance of their schools' students and the teaching and other work performance of their staff. To this end, they are and must remain fully qualified teachers with a demonstrated track record of teaching excellence. It would be inconceivable for business to have as its leaders, people who were not business men or women, for universities to have non-academics as their vice-chancellors, for hospitals or medical practices to have non-medical persons as their CEOs, for ships to have non-seamen as their captains .... and similarly for schools.

School leadership is a role, responsibility or accountability not unique to one particular position, the school principal, but shared or distributed across all leadership positions in a school.

As McKenzie et al (2008) record, it is the challenge of such a role that motivates teachers to become school leaders.[72]

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[70] OECD (2011c), *Reviews of Evaluation and Assessment: Australia*, pp91, 93.
[71] Only a value added model [VAM] which involved testing all students at all levels and in all subject/curriculum areas would have efficacy and such a testing regime would be cost prohibitive. OECD, (2011c), *Reviews of Evaluation and Assessment: Australia*, p93 and Note 3, p96.
[72] McKenzie, et al, (2008), *Staff in Australian Schools 2007*, pp37-38.

However, there are significant issues. Higher proportions of school leaders tend to be closer to retirement age and this accounts for higher proportions of such people intending to leave the profession within 3 years. Of those that intend continuing for longer than 3 years, the overwhelming majority intend staying at their current school and position or to seek promotion within their current school.[73] Comparatively few teachers (10%) intend applying for principal or deputy principal positions and cite work/life balance, job pressure and the desire to remain teaching.[74]

Interestingly, school leaders cite as strategies to help retain leaders in the profession: more support staff, less imposed change, reduced workload and more positive public image (around 80% plus). However comparatively fewer cite high salaries or monetary rewards or greater autonomy (50%-70%).[75]

Greater school autonomy, and the increase in work intensification that goes with it, is consequently unlikely to increase attractiveness of leadership, increase leadership retention rates or increase job satisfaction.[76]

As schools serve public purposes, school leaders will require skills which foster the development of their schools as professional learning communities, foster democratic practices and develop and interpret evidence based policy.[77]

In a national survey of government primary school principals in 2009, such leaders valued and rated most highly strategies which helped students develop a love of learning and which helped them become active and responsible members of a democratic society and which encouraged responsibility, trust, respect and professionalism amongst staff and students. They de-valued strategies associated with student selection, national testing, greater school autonomy, school accountability for social outcomes and parental involvement in curriculum negotiations.[78]

The skills required to put such strategies into place require more than administrative, financial or managerial competencies. They require the highest levels of personal, communication, motivation and team building skills.

9. School Autonomy

9.1   Q: *What are the advantages and disadvantages of increasing school autonomy? To what extent can currently centralised responsibilities be sensibly devolved to the school level? What lessons can be learned from approaches in Victoria and other countries, as well as from experiences in independent schools?*

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[73] Ibid, pp84. 88
[74] Ibid, pp 91-92.
[75] Ibid, pp102-103.
[76] Caro, J., (2011), *A Matter of Principal: Repair Learners or Repair Buildings*, Sydney Morning Herald, 22 August, 2011.
[77] Presentation by Professor Alan Reid at the launch of the report *'Exploring the Public Purposes of Education in Australian Primary Schools'* held at the Holiday Inn, Melbourne Airport on 21 March, 2011.
[78] Cranston et al (2009), *Researching the Public Purposes of Education in Australia: The Results of a National Survey of Primary School Principals*, Tables 2 and 3.

9.2   Q: *What specific governance and regulatory arrangements are needed to support greater school autonomy?*

9.3   Q: *What other checks and balances are required to ensure individual schools do not advance their interests at the expense of outcomes across the whole system? Specifically, could schools serving disadvantaged communities be left worse off by the competition for resources that might result from decentralisation? To what extent could such outcomes be ameliorated by concomitant increases in the flexibility of remuneration arrangements?*

9.4   Q: *Is a 'one size fits all' approach to school autonomy appropriate, or should the degree of autonomy enjoyed by schools vary according to their performance?*

Proposals for increasing school autonomy are generally problematic. As a concept, 'school autonomy' risks becoming all things to all people and, consequently, meaningful to none. In educational circles in Australia over the last thirty years or so, the concept has tended to refer to broad, always evolving government policy approaches whereby authority, obligation and responsibility is increasingly and variously removed from central agencies and placed upon the local school. School councils, as 'committees of management', are created and provided with greater authority to determine their school's local educational and other priorities and staffing requirements and school leaders are empowered with greater control over financial resources allocated to them. The approach is viewed as one of 'devolution' or of 'decentralisation' and is encapsulated by policy initiatives called 'self-managing' or 'self-governing' schools or 'independent public schools'.

The current Federal Government policy initiative is termed 'Empowering Local Schools' and all state and territory jurisdictions and non-government educational authorities have agreed to participate in it subject to satisfactory bilateral negotiations on implementation plans and funding agreements.[79] The policy is said to provide schools with responsibility for determining their own governance arrangements, managing their budgets and staff and assessing staff performance and to be 'rolled- out' over the period 2012-2018.

According to the Queensland Government, research indicates that teaching quality and school leadership drive student outcomes far more than adjusting structural or governance arrangements in delivering education and any effective funding model should consider these essential drivers of educational outcomes.[80] The same submission points out that in larger jurisdictions with more numerous rural and remote communities and, therefore, school locations, greater autonomy will militate against teacher recruitment processes and the imperative for government oversight of a centralised teacher transfer system to meet the needs of schools, students and teachers.[81]

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[79] MCEECDYA, *Communique*, 12th meeting, 8 July 2011.
[80] Queensland Government Response to the *Australian Government Review of Funding for Schooling*, (July, 2011), p4.
[81] Ibid, pp33-34.

The evidence, both within Australia and internationally, on the 'increasing school autonomy' agenda is clear. Greater 'autonomy' over issues such as school governance, workforce, infrastructure and funding has little or no effect on improvement on student outcomes but significant detrimental effects on further disadvantaging school communities already experiencing educational disadvantage.

The Productivity Commission is referred to the AEU Submission to the current Federal Government's *Review of Funding for Schooling*, especially the section on Governance and Leadership and the research evidence cited therein.[82]

In a review of evidence from the Academy Schools in the United Kingdom, Charter Schools in the United States and Victoria's *Schools of the Future*, in the context of Western Australia's *Independent Public Schools* initiative, Fitzgerald and Rainnie (2011) conclude:

1. *The drive behind the reforms is primarily financial, aimed at cutting public sector spending, particularly wage costs.*

2. *There is disturbing evidence from the UK and other parts of Australia that the policy threatens standards of service delivery, as well as terms and conditions of employment of staff within the public education system.*

3. *Self-managed schools do not improve 'student learning outcomes'.*

4. *Financial inducements to move to self-managed status rapidly disappear, reinforcing existing inequality within and between schools.*

5. *The aim is to abolish the distinctiveness of public schools and align their methods, culture and ethical systems to that of the private sector.*

6. *School staff have increased workloads with principals increasingly required to be managers rather than educators.*

7. *The combined drivers of managerialism, marketisation and performance management have led to a decline in the proportion of women in senior management positions, including principals.*

8. *Teachers experience corrosion in the culture and character of teaching.*

9. *The process shifts risk and responsibility to individuals and the community, and reinforces inequality and social disadvantage.*

10. *Marketisation in the education sector increases hierarchies and gender inequalities in the workforce*[83]

The CREDO Study (2009) at Standford University, USA, into student level impacts of Charter schools has established that, in aggregate, charter school students do not fare as well as their traditional public school counterparts. There were however interesting variations; in charter schools: maths was worse than reading achievement, Blacks and Hispanics did worse but students in poverty, English

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[82] AEU (2011), pp 59-63.
[83] Fitzgerald. S., & Rainnie. A.. (2011), *Putting the Public First: An Examination of the Implications of the 2009 EAC Report, Part 2 – Independent Public Schools*. p2.

Language Learners and Special Education did better and elementary and middle school grades did better than high school grades.[84]

The Commission is also referred to a review of international evidence on government and educational policy reform over the last 50 years. Levin (2010) concludes that policies which emphasise choice and competition and structural factors such as governance, finance, workforce and accountability do not evidence improvement in student outcomes in any sustained way across a system.[85]

Recent OECD research also sounds a cautionary note of warning concerning the use of market mechanisms of choice and competition in education in an effort to boost performance. Lubienski, (2009), in analysing data from both OECD and non-OECD countries concludes that there is no direct causal relationship between mechanisms of choice and competition and improvements in classroom practice.[86] Waslander et al, (2010), take the analysis somewhat further in reviewing the empirical evidence on market mechanisms in education. They show that market mechanisms are not any more effective in driving educational improvements than standard government 'direct' interventions. Education markets tend to be highly localised, heavily influenced by contextual factors of status and hierarchy and as a result show high levels of inelasticity in supply and demand, eg, parents will send their children to some schools despite the very high cost and despite the lack of any substantial difference in student achievement levels.[87]

Mourshed et al (2010) in a major international study (published by McKinsey & Co) of 20 educational systems that have shown the most sustained improvement in student achievement since 1980, identify 6 common 'interventions' adopted by all systems: revising curriculum and standards, ensuring appropriate reward and remuneration, building technical skills of educators, assessing students, establishing data systems and facilitating those processes through policy publication and legal prescription. While Mourshed et al note that there is a correlation between a school system's improvement journey 'stage' and the 'tightness' of centralised control, the move to greater system improvement is characterised NOT by greater autonomy over governance, workforce, finance or infrastructure but over teaching and learning processes.[88] Mourshed et al also stress the evidence shows the need for a 'systemic approach' rather than specific, discrete or ad hoc programs.

The Australian evidence, based on NAPLAN results, shows that more autonomous school systems produce no better student outcomes than more centralised school systems.[89]

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[84] CREDO, (2009), *Multiple Choice: Charter School Performance in 16 States*, pp5-6.
[85] Levin (2010), p740. For a Canadian strategy on large-scale systemic improvement in education that de-emphasised these structural elements as well as student testing and curriculum change but emphasised teaching, learning and assessment practices, see Levin (2007).
[86] Lubienski, C. (2009), "Do Quasi-markets Foster Innovation in Education?: A Comparative Perspective", *OECD Education Working Papers*, No. 25, p45
[87] Waslander et al, (2010), "Markets in Education: An Analytical Review of Empirical Research on Market Mechanisms in Education", *OECD Education Working Papers*, No. 52, pp 64-68.
[88] Mourshed et al, p26.
[89] See Suggett, D., (2010), *NAPLAN Results and the States: An Intriguing Result*.

Anecdotally, it is the experience of the AEU that it is a nonsense to require schools in rural and remote communities or other difficult to staff locations to recruit and select their own staff when staff simply aren't available for recruitment or these locations aren't provided with the resources to enable such recruitment. It is a nonsense to allegedly provide greater autonomy to schools over how to spend their finances but then maintain rigid central control over formulae for determining the amount of such finance (or size of budget). It is a nonsense to develop standards of teacher professional practice which stress professional autonomy but then to centrally standardise the student testing or assessment regimes to be used in part to assess performance against such standards.

10. Meeting the Needs of Particular Student Populations

10.1 Q: *How effective is the current suite of workforce-related initiatives to address educational disadvantage? Should the goal of such policies be greater equality in education outcomes or greater equality of opportunity for all students to realise their educational potential? Does the choice between these two alternatives have implications for the nature of the schools workforce policies that should be employed to address educational disadvantage?*

10.2 Q: *Are all student groups that are experiencing significant educational disadvantage being given suitable recognition in the current workforce policy framework? Are current measures of socioeconomic status adequate?*

10.3 Q: *Are school workers sufficiently trained to deal with special needs students, students from cultural and language backgrounds other than English, and students with any other specific educational requirements?*

10.4 Q: *Are there particular qualities that are especially important in teaching Indigenous students? Do existing teaching courses place sufficient emphasis on the development of these qualities? How might the number of Indigenous Australians training to enter the schools workforce be increased?*

10.5 Q: *Are there workforce changes that would assist disadvantaged students make a successful transition from school to work or further education?*

10.6 Q: *What are the main factors that influence the choice of teachers and other professionals to work in areas of educational disadvantage or with students with specific educational needs?*

The AEU has provided material on this subject matter elsewhere in this submission. That material deals with the identification of different cohorts of students for teacher training, revision of teacher education programs and the provision of better resourced, and a greater range of, monetary and non-monetary incentives in order to ensure a greater supply of highly trained and motivated teachers to meet the needs of particular student populations. The material also deals with the need for there to be developed a consistent measure of socio-economic status and of educational disadvantage.

As appropriate levels of funding are critical to this issue, the Commission is also specifically referred to the AEU *Submission to the Review of Funding for Schooling*, especially pp 12-18. The issue of funding is especially pertinent to

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meeting the educational needs of students with disabilities or other special needs about which the AEU has recently published.[90]

In this regard, important research by Professors Teese and Lamb (2011) shows how government funding policies can entrench the educational disadvantage of students from low socio-economic backgrounds by increasing 'choice' and thereby altering the social composition of student populations in schools.[91]

11. The Surrounding Institutional Framework

11.1 Q: *How responsive is the overall institutional regime to changing circumstances? Is the established culture and practice within education departments and related regulatory agencies, as well as in government and non-government schools, an impediment to workforce reform?*

11.2 Q: *Are industrial relations arrangements in the schools sector sufficiently flexible? Are there particular regulatory or institutional factors that may impede the recruitment and retention of high quality school workers? How can these be addressed?*

11.3 Q: *Does the policy interface between the Australian Government and State and Territory Governments pose challenges for effective schools workforce reform? What effect will initiatives such as national accreditation and registration requirements, and the introduction of a national curriculum, have on the schools workforce and its capacity to meet the needs of students, parents and the community?*

11.4 Q: *Is there sufficient engagement between the government and non-government school sectors on workforce-related issues?*

11.5 Q: *How effective is the interaction with parents and the community on matters relating to student progress and school policy? How engaged are parents in school governance processes, in classroom support, and in other aspects of school activity?*

11.6 Q: *Is there sufficient interaction and coordination between the schools, ECD and VET sectors?*

11.7 Q: *Is there an adequate focus on the evaluation of programs (including the dissemination of evaluation results), and a readiness to adjust programs if evidence indicates that improvements can be achieved?*

11.8 Q: *Are there particular information and data gaps, either in collection or dissemination, that impede good decision making in education policy? Are the current institutional arrangements for undertaking research on schools workforce policy, and on education policy more generally, adequate? If not, how might they be improved?*

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[90] AEU (2010b), *The Provision of Education for Students with Disabilities/Special Needs.*
[91] Teese, R. & Lamb, S., (2011), *Submission to the Review of Funding for Schooling,* pp 10-12.

12. Recent Policy Developments

12.1 Q: *Do the reforms, in train or in prospect, address the right issues?*

12.2 Q: *What reform areas should be afforded the highest priorities?*

12.3 Q: *Are there any significant gaps in the reform agenda, or reforms that are unlikely to be particularly beneficial?*

12.4 Q: *Are the implementation/evaluation/review arrangements likely to be effective?*

12.5 Q: *In the context of the current reform initiatives outlined above, where can the Commission's study into the schools workforce best add value?*

The AEU notes that each of the issues raised in sections 11 and 12 have been raised or dealt with elsewhere in this submission. The AEU remains prepared to elaborate on these submissions at any future forum the Commission wishes to convene.

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Appendix 1

Education and Training Workforce

Terms of reference

I, Nick Sherry, Assistant Treasurer, pursuant to Parts 2 and 3 of the *Productivity Commission Act 1998* hereby request that the Productivity Commission undertake a research study to examine issues impacting on the workforces in the early childhood development, schooling and vocational education and training sectors, including the supply of and demand for these workforces, and provide advice on workforce planning, development and structure in the short, medium and long-term.

Background

The Council of Australian Governments (COAG) has agreed on common strategic frameworks to guide government action on early childhood development, schooling and vocational education and training (VET) across Australia.

Building the capability and effectiveness of the workforces in these sectors, particularly for Indigenous people, will be critical to achieving the outcomes agreed in these frameworks. This study is to be undertaken in this context, and responds to a request from the COAG Working Group on the Productivity Agenda that the Productivity Commission undertake a research study examining workforce issues in these sectors.

Scope

The Commission is to provide advice on workforce planning, development and structure of the early childhood development, schooling and VET workforces in the short, medium and long-term.

In undertaking this study, it should consider and provide advice on:

1. The current and future demand for the workforces, and the mix of knowledge and skills required to meet service need. This will include consideration of:

    a. population distribution and demographic trends, jurisdictional and regional analysis

    b. significant shifts in skill requirements

    c. policy and regulation given the agreed COAG outcomes (particularly the National Early Childhood Development Strategy, relevant National Partnerships, the National Education Agreement and the National Indigenous Reform Agreement).

2. The current and future supply for the workforces, including:

    a. demographic, socio-cultural mix and composition of the existing workforces, and jurisdictional and regional analysis

b. elements such as remuneration, pay equity/differentials, working conditions, professional status and standing, retention, roles and responsibilities, professional development, and training and support structures

c. qualifications pathways particularly pathways that will ensure accessibility and appropriateness of training to meet the qualifications and competencies required for the various occupations in the workforces.

3. The current and future structure and mix of the workforces and their consequential efficiency and effectiveness, including:

   a. the composition and skills of the existing workforces

   b. the productivity of the workforces and the scope for productivity improvements

   c. the most appropriate mix of skills and knowledge required to deliver on the outcomes in the COAG national framework.

4. Workforce planning, development and structure in the short, medium and long-term, including:

   a. policy, governance and regulatory measures to maximise the efficiency and effectiveness of the workforces in order to achieve the outcomes set out in the COAG frameworks

   b. changes to ongoing data collection to establish a robust evidence base, provide for future workforce planning and development and meet reporting requirements.

In addressing the Terms of Reference, a key consideration will be the extent to which sectoral and jurisdictional boundaries limit innovation and flexibility in workforce planning, development and practices. In addition to sector-specific issues, the Commission is therefore requested to consider whether reducing sectoral divides between workforces in these sectors could support a more learner-focused approach, achieve better individual outcomes and increase the efficiency of workforce development and planning.

Cross-sectoral and integrated service delivery

In recognition of some lowering of cross-sectoral boundaries and the growth of cross-sectoral delivery and integrated service delivery models, the Commission is asked to consider and provide advice on:

1. workforce skill and training needs

2. the extent to which job design and employment agreements in the sectors are aligned to contemporary work practices

3. implications for workforce planning across the sectors from integrated service delivery

4. the extent to which existing employer practices encourage attracting and retaining employees.

In addition, the Commission is to give consideration to factors that impact on building Indigenous workforce capability in recognition of the effect this will have on improving outcomes for, employment of and services to Indigenous Australians.

The Commission is also to give consideration to factors that have particular impact on each sector. These will include:

1. The Early Childhood Development Workforce

The Early Childhood Development (ECD) workforce can include, but not be limited to: coordinators and managers, early childhood teachers, teaching assistants and para-professionals, childcare workers for pre-primary and primary aged children, early childhood intervention professionals, administrative staff, community service workers and relevant health and social welfare professionals.

In relation to the ECD workforce the Commission is asked to specifically consider and give advice on:

1. Factors affecting the current and future demand and supply for the ECD workforce, and the required mix of skills and knowledge, including:

   a. delivery of fully integrated ECD services including maternal and child health, childcare, preschool, family support services and services for those with additional needs

   b. market requirements for broader leadership, management and administrative skills in operating both mainstream universal service providers and integrated service hubs

   c. the availability and quality of pre-service education programs, including through undergraduate and postgraduate education and VET, and consideration of training pathways

   d. ECD workforce participation, including ease of access to the early childhood development workforce in different sectors and net returns to individuals and recognition of expertise

   e. the quality and skills of the workforce, job design and workplace practices and arrangements and their contribution to achieving COAG outcomes and setting future direction.

2. Workforce planning, development and structure in the short, medium and long term, covering:

   a. career pathways, the structure of existing employment arrangements and practices and the extent to which they are dis/incentives to attracting and retaining employees, including pay   and conditions across settings; strategies to address possible pay equity issues as necessary; options for funding pay increases as necessary; and the implications for purchasers of ECD services and all levels of government and funding responsibilities

   b. potential labour market failures

c.   the impact of government, community and private provision

d.   the concept and workforce implications of integrated service delivery.

2. The Schooling Workforce

The schooling workforce refers to teachers and those who support the practice of teaching. These can include, but are not limited to: leaders and managers; teaching assistants and para-professionals; administrative staff; and relevant health professionals.

In relation to the schooling workforce the Commission is asked to specifically consider and give advice on:

1.   The current and future supply for the schooling workforce, including:

     a.   the availability and quality of pre-service education programs, including through undergraduate and postgraduate education, and VET

     b.   government programs targeting supply pressures, including the extent to which there is national cohesion in relation to these programs

     c.   motivation for entering, remaining in and exiting the school workforce and the attraction and retention of principals in changing contexts

     d.   school workforce participation, including ease of access to the teacher profession and/or schooling workforce, net returns to individuals, recognition of industry expertise, wastage rates in teacher training and underutilisation of qualified teachers (such as loss of qualified teachers to other occupations or overseas).

2.   The structure and mix of the workforce and its consequent efficiency and effectiveness, including:

     a.   the composition and skills of the existing workforce

     b.   the productivity of the workforce and the scope for productivity improvements, qualifications pathways

     c.   how the current delineation of duties supports or impedes the achievement of COAG outcomes.

3.   Workforce planning, development and structure in the short, medium and long term:

     a.   the extent to which current sectoral boundaries promote or limit efficiency and effectiveness in schooling workforce

     b.   interface with suppliers of pre-service training (undergraduate, post-graduate and VET)

     c.   the quality and culture of the workforce and its employers, and their contribution to achieving COAG outcomes and setting future directions.

3. The VET Workforce

The status of VET practitioners as 'dual professionals', deploying both industry and education skills delivered in schools, VET only, dual sector and industry settings, is unique among education sectors, and poses both challenges and opportunities for the VET sector in attracting and retaining staff. In addition, the increasingly commercial environment in which many providers operate creates a significant role for VET professionals who are engaged in organisational leadership and management, but not directly involved in training delivery. The impact of this trend on the required capabilities of VET professionals is of policy interest.

In relation to the VET workforce, the Commission is asked to consider both the VET workforce as a whole, including trainers and assessors in enterprises, adult community education and community organisations, and the TAFE workforce as a subset, and provide advice on:

1. Factors affecting the current and future demand for the VET workforce, and the required mix of skills and knowledge:

    a. change in participation in VET as a result of increasing labour market emphasis on formal training and lifelong learning

    b. change in volume and type of training delivered to each VET participant as a result of the trend towards higher level qualifications, and as a result of the impact of the Recognition of Prior Learning (RPL) and the Recognition of Current Competencies (RCC)

    c. likely future patterns of training demand by industry and sector, including as a consequence of responses to emerging economic and environmental issues and to gap training and skills assessment

    d. requirement for broader skills in VET professionals as a result of increasing system focus on client needs, including flexible delivery, greater focus on employability skills, catering for a more diverse student base, and partnering with enterprises and communities

    e. demand for managerial and entrepreneurial skills as a result of growing commercial dimensions of the VET sector and strategic market positioning and branding

    f. the impact of delivery of higher level VET qualifications (e.g. Associate and Bachelor Degrees)

    g. training pathways and the provision of 'second chance' education and training such as for migrant and Indigenous students.

2. The current and future supply of the VET workforce, including:

    a. motivation for entering, remaining in and exiting the workforce

    b. competition from other employers including industry and other education sectors.

3. The structure of the workforce and its consequent efficiency and effectiveness, including:

    a. the extent to which job design and employment agreements in the VET sector are aligned to contemporary work practices in a commercially competitive environment

    b. the adequacy of support for high-quality professional practice, including consideration of practitioner qualifications and standards for VET practitioners across sectors

    c. the current and potential impact of workforce development activities within the VET sector on the capability and capacity of the VET workforce, including a workforce development plan

    d. the implications of emerging workplace and employment practices, including increasing casual and part-time employment, the 'core/periphery' model and blurring of teaching and non-teaching roles.

Study Process

In undertaking its study, the Commission should consult widely with relevant professionals and interested parties. It should use, but not replicate, existing work such as that underway by COAG, the relevant Ministerial Councils, Senior Officials' Working Groups and jurisdictions, including on:

- teacher quality reforms

- further reforms arising from policy directions of the National Agreement on Skills and Workforce Development

- Indigenous reforms

- previous work commissioned by the Victorian DHS for the Community Services Ministers Advisory Committee.

This should include relevant recent survey work and workforce studies in each sector and research undertaken by NCVER, ACER, various university research centres, TAFEs and Industry Skills Councils, and the OECD.

The study should include a comparative element, both in terms of comparing the education and training workforce to other community/public service professions such as the health sector, and of relevant international comparisons, particularly with regard to the ECD workforce which is undergoing significant reform in Australia.

The Commission should provide a report, dealing with the VET workforce, within twelve months of receipt of this reference; and a second and third report, dealing with the early childhood development and schooling workforces, within eighteen and twenty four months respectively of receipt of this reference. The reports will be published.

Nick Sherry
Assistant Treasurer [Received 22 April 2010]

Appendix 2

Teacher qualifications and student achievement: A Selected, Annotated Bibliography

Akiba, M. & LeTendre, J., (2007) Teacher Quality, Opportunity Gap, and National Achievement in 46 Countries. *American Educational Research Association*, Vol. 36, No. 7, pp. 369-387. http://www.jstor.org/pss/30136069

Peer Reviewed.

The 2003 Trends in International Mathematics and Science Study data from 46 countries showed that the US opportunity gap in students' access to qualified teachers between students of high and low socioeconomic status (SES) was among the largest in the world. Cross-national analyses revealed that the countries with better teacher quality produced higher mathematics achievement. These analyses provide empirical, cross-national evidence of the importance of investing in teacher quality, including certification, for improving national achievement. The paper concludes that National policies and practices related to improving teacher quality, including certification, appear to be a promising area for future research to identify how other countries have achieved both excellence and equity in student achievement.

Alexander, C (2004) *Does Teacher Certification Matter? Teacher Certification and Middle School Mathematics Achievement in Texas.* Paper presented at the Annual Meeting of the American Educational Research Association, April 12 2004.
http://www.sedl.org/pubs/policyresearch/resources/AERA-2004.pdf

This study employs a value added approach by calculating changes in middle school student achievement on the mathematics Texas Assessment of Academic Skills (TAAS) for each teacher from 1997-98 to 1998-99 academic years. (Certification is taken to mean qualification, with the paper stating "The goal of this study is to look at patterns of teacher qualification in association with student performance.") The study concludes that, "The major findings indicate that compared to students with non-certified teachers, the students with certified teachers, on average, perform better on the 1999 TAAS math assessment. These results include controlling for other important variables such as, student characteristics, teacher characteristics and the campus characteristics".

Ashton, P., Crocker, L., & Olejnik, S. (1986). *Does teacher education make a difference? A literature review and planning study.* Executive summary and technical monograph prepared for the Institute on Student Assessment and Evaluation, Florida Department of Education. http://www.eric.ed.gov/PDFS/ED276711.pdf

This early study reviewed research that addressed the question: Is type of teacher education related to student performance? Major findings were: (1) teachers with master's degrees were rated as more effective by supervisors and had higher levels of student achievement than teachers with bachelor's degrees; (2) supervisors rated college of education graduates more highly than graduates from liberal arts; (3) teachers who earned more credit hours in professional education obtained higher ratings from supervisors and had higher student test

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scores than teachers with fewer credits; (4) number of credit hours taken by teachers in academic subjects was reflected in their students' achievement; (5) teachers with higher grade point averages and higher scores on tests in the subjects they taught had higher student achievement; (6) the National Teacher Examination was not a good predictor of either teacher performance or student achievement; (7) teachers' grade-point average tended to be a more stable predictor of teacher performance than teachers' scores on a single test; and (8) teachers meeting certification requirements received higher supervisor ratings and had higher student achievement than teachers who did not meet certification standards.

Boyd, D, Grossman, P, Lankford, H, Loeb, S & Wyckoff, J. (2006). How Changes in Entry Requirements Alter the Teacher Workforce and Affect Student Achievement. *Education Finance and Policy* **1, 2 , pp. 176-216.** http://www.nber.org/papers/w11844.pdf

Peer reviewed.

This study examined the effectiveness of 3,766 new teachers who entered teaching in grades 4-8 through different pathways in New York City. The study found that, compared to the students of new teachers who graduated from teacher education programs, students of new Teacher for America (TFA) recruits scored significantly lower in reading / language arts and about the same in mathematics (worse in grades 4-5 and better in grades 6-8). These results were similar to those of other unqualified teachers. By the 2nd year, when most TFA recruits were certified, the negative effects disappeared for elementary maths and middle school reading. However, TFA teachers continued to exert a significant negative influence on their students' reading scores. By their third year, the effect was still negative, but not statistically significant. The report notes that most TFA teachers left after their second year, 73% by year three and 85% by year four, as compared to about 50% of other non-traditional entrants and 37% of college prepared teachers. This attrition rate raises the possibility that the perceived improvement of TFA teachers over the four years may be due to the exit of less effective teachers.

Boyd, D., Grossman, P., Lankford, H., Loeb, S, Rockoff, J & Wyckoff, J. (2008) The Narrowing Gap in New York City Teacher Qualifications and its Implications for Student Achievement in High-Poverty Schools. *Journal of Policy Analysis and Management,* **Vol. 24, No. 4, pp. 793-818.** http://www.nber.org/papers/w14021

Peer reviewed.

This research explores the how the distribution of teacher qualifications and student achievement in New York City have changed from 2000 through 2005 using data on teachers and students. While new laws (NCLB and state laws) have led to a sharp decline in the number of unlicensed teachers hired, this study finds this has been mostly by the substitution of teachers entering through alternative certification routes such as Teach for America, although there has been some improvement in the proportion of fully qualified teachers hired. The study finds that teachers' certification status, pathway into teaching, teaching experience, graduation from a competitive college, and math SAT scores were significant predictors of teacher effectiveness in elementary and middle grades mathematics. Student achievement was most enhanced by having a fully certified teacher who had graduated from a university pre-service program, who had a strong academic background, and who had more than two years of teaching experience. Students' achievement was hurt most by having an inexperienced teacher on a temporary license.

It should be noted that the claimed improvements in state based ELA exams which form the basis of much of the study's methodology have come under question due to their lack of consistency with the National Assessment of Education Progress (NAEP) tests.

Boyd, D., Grossman, P., Lankford, H., Loeb, S. & Wyckoff, J. (2008, September). *Teacher preparation and student achievement.* **NBER Working Paper Number W14314. National Bureau of Economic Research.** http://ssrn.com/abstract=1264576.

This paper claims to be one of the first to estimate the effects of features of teachers' preparation on teachers' value-added to student test score performance in math and English Language Arts. Results indicate variation across preparation programs in the average effectiveness of the teachers they are supplying to New York City schools. In particular, it found that preparation directly linked to practice appears to benefit teachers in their first year. It also found that some individual teacher education programs have much more positive effects than others, based on their graduates' contributions to value-added student achievement. The researchers examined the features of programs that influenced their graduates' effectiveness. Key features that maximised achievement were:

- Candidates' student teaching experience and the match between the context of student teaching and their later teaching assignment
- Programs' careful oversight of the quality of candidates' field experiences
- A focus on helping candidates learn specific practices applied in clinical experiences
- The amount of coursework in content areas (math and reading) and in methods of teaching mathematics
- Candidates' opportunities to study the local district curriculum
- A capstone project (typically a portfolio of work done in classrooms with students)
- Programs' percentage of tenure-line faculty, which the researchers viewed as a possible proxy for institutional investment and program stability.

Cavalluzzo, L. C. (2004) *Is National Board Certification an Effective Signal of Teacher Quality?* **(Alexandria, Va.: CNA Corp., 2004)** http://www.eric.ed.gov/PDFS/ED485515.pdf

This study uses data based on 108,000 individual student records from a large urban school district to examine the association between student gains in mathematics in the ninth and tenth grades in relation to National Board Certification (NBC), and other indicators of teacher quality. NBC requires a full teacher qualification and can to some extent be regarded as a proxy for qualification. Once other factors were controlled for, the study found that students of teachers who had achieved NBC made the greatest gains, whilst students with new teachers who lacked and regular state certification and those whose job assignment was not mathematics made the smallest gains.

Clotfelter, C, Ladd, H & Vigdor, J (2007). *How and why do teacher credentials matter for student achievement?* **(NBER Working Paper 12828). Cambridge, MA: National Bureau of Economic Research.** http://www.nber.org/papers/w12828

This paper uses a "rich administrative data set" from North Carolina to explore a range of questions related to the relationship between teacher characteristics and credentials on the one hand and student achievement on the other. The study concludes that a teacher's experience, test scores and regular licensure all have positive effects on student achievement, with larger effects for math than for reading. Students gain more if their teacher is fully prepared when

they enter rather than entering through an alternative route, are certified in the area in which they teach, have higher scores on the teacher licensing test, have taught for more than two years, have graduated from a competitive colleges, and have become National Board Certified by completing a performance assessment documenting their teaching. Taken together the various teacher credentials exhibit quite large effects on math achievement, whether compared to the effects of changes in class size or to the socio-economic characteristics of students.

Clotfelter, C., Ladd, H., Vigdor, J., (2010). Teacher Credentials and Student Achievement in High School. A Cross-Subject Analysis with Student Fixed Effects. *Journal of Human Resources,* **Vol. 45 No. 3 pp. 655-681.** http://jhr.uwpress.org/content/45/3/655.abstract

Peer reviewed.

This study uses data on state wide end-of-course tests in North Carolina to examine the relationship between teacher credentials and student achievement at the high school level. It finds "compelling evidence that teacher credentials, particularly licensure and certification, affects student achievement in systematic ways and that the magnitudes are large enough to be policy relevant." The findings imply that the uneven distribution of teacher credentials by race and socioeconomic status of high school students in the US contributes to achievement gaps in high school.

Constantine, J, Player, D, Silva, T, Hallgren, K, Grider, M, Deke, J, (2009). *An Evaluation of Teachers Trained Through Different Routes to Certification: Final Report.* **Mathematica Policy Research, Inc, Institute of Education Sciences**

This study claims to find that there is no statistically significant difference in performance between students of alternatively certified and traditionally qualified teachers. It has been criticised on a number of grounds, including its small sample size and allegedly inadequate methodology, its failure to report in its conclusions the "many analyses from the study" that qualified teacher perform better, and the fact that both traditional and alternative students in the hard-to-staff schools selected for the study had less training than most teachers nationally, making its comparisons invalid.

See:

- Linda Darling Hammond's critique of this study, *Educational Opportunities and Alternative Certification: New Evidence and New Questions* (2009)
- Corcoran and Jennings review, (2009) below.

Corcoran, S. P., & Jennings, J. L. (2009). *Review of "An Evaluation of Teachers Trained Through Different Routes to Certification: Final Report."* **Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit.** http://epicpolicy.org/thinktank/review-evaluation-of-teachers

This review of the Mathematica study (Player, Silva, Hallgren, Rinder and Deke, 2009, above) concludes that "few if any valid conclusions about certification policy can be drawn from the report because the study":

- Did not fully report and acknowledge in its conclusions the many analyses from the study finding that traditionally trained teachers outperformed alternative route teachers in both math and reading.
- Has a research design that favours finding few significant differences between groups, most notably its small sample size, sampling methods, and failure to distinguish the 'treatments' that alternative certification and traditional certification teachers provided.
- Is relevant only to a very limited population of teachers in schools that hire many alternatively certified teachers, and is not generalizable to most US states, districts, and schools that do not allow such programs and are more selective in their hiring.

Claiming that, "the Mathematica report is quick to draw broad and unqualified implications from the study and...neglects to properly emphasize the study's many limitations" the paper advises policy makers to "read it with caution".

Croninger, G. C., Rice, J., K., Rathbun, A., & Nishio, M. (2007). Teacher qualifications and early learning: Effects of certification, degree, and experience on first-grade student achievement. Economics of Education Review, 26, 312–324.
http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearc
h_SearchValue_0=EJ762747&ERICExtSearch_SearchType_0=no&accno=EJ762747

Peer reviewed.

This study draws on data from the Early Childhood Longitudinal Study (ECLS) of 23,000 kindergarteners attending 1,300 public and private schools to analyse the relationship between elementary school teacher qualifications and first-grade achievement in reading and mathematics. While it finds no effects for certification status, it reports positive effects for teachers' degree type and experience on reading achievement. Of the different factors studied, (certification, experience, possession of a higher degree) it finds that possession of an elementary teaching degree is the greatest predictor of student achievement in reading. Whilst the same effect was not found for mathematics, the researchers note that this may be due to the disproportionate amount of time devoted to reading in the first grade, and that there may well be stronger effects of teacher qualifications on mathematics achievements in later grades.

Darling-Hammond, L., (1999) *Teacher Quality and Student Achievement: A Review of State Policy Evidence*. Center for the Study of Teaching and Policy. University of Washington. Also published in *Education Policy Archives*, Vol. 8, 2000.
http://www.politicalscience.uncc.edu/godwink/PPOL8687/WK11March%2029%20Teachers/
Darling-
Hammond%20Review%20essay%20on%20teacher%20quality%20and%20outcomes.pdf

Peer Reviewed

Using data from a US 50-state survey of policies, state case study analyses, the 1993-94 Schools and Staffing Surveys (SAS) involving 65,000 teachers, and the National Assessment of Educational Progress (NAEP), this study examines the ways in which teacher qualifications and other school inputs are related to student achievement across states, taking student characteristics into account. Quantitative analyses indicate that measures of teacher preparation and certification are by far the strongest correlates of student achievement in reading and mathematics, both before and after controlling for student poverty and language

status. Furthermore, the study found that the states that lead the nation in student achievement in mathematics and reading have amongst the most highly qualified teachers in the US.

Darling-Hammond, L, (2002). Research and Thetoric on Teacher Certification: A Response to "Teacher Certification Reconsidered". *Education Policy Analysis Archives, Vol. 10, No. 36.* http://epaa.asu.edu/ojs/article/view/315

Peer Reviewed.

In October, 2001, the Baltimore-based Abell Foundation issued a report purporting to prove that there is "no credible research that supports the use of teacher certification as a regulatory barrier to teaching" and urging the discontinuation of certification in Maryland. (see Walsh, 2001, below). The report argued that large inequities in access to certified teachers for poor and minority students are not a problem because research linking teacher education to student achievement is flawed. This article documents the many inaccuracies in the Abell Foundation paper and describes the actual findings of many of the studies it purports to review, as well as the findings of other studies it ignores. It details misrepresentations of a number of studies, including inaccurate statements about their methods and findings, false claims about their authors' views, and distortions of their data and conclusions. The article addresses methodological issues regarding the validity and interpretation of research. Finally, the article presents data challenging the Abell Foundation's unfounded claims that uncertified teachers are as effective as certified teachers, that teacher education makes no difference to teacher effectiveness, that verbal ability is the most important determinant of teaching effectiveness, that private schools staffed by uncertified teachers are more effective than public schools, and that untrained teachers are more qualified than prepared teachers.

Darling-Hammond, L., Berry, B. & Thoreson, A. (2001). Does teacher certification matter? Evaluating the evidence. *Education Evaluation and Policy Analysis, 23*(1), 57-77. http://www.teachingquality.org/pdfs/doescertificationmatter.pdf

Peer reviewed.

The authors respond to Dan Goldhaber and Dominic Brewer's article in the Summer 2000 issue of Educational Evaluation and Policy Analysis that claims, based on an analysis of NELS teacher and student data, that teacher certification does not matter for student achievement. Although Goldhaber and Brewer found strong and consistent evidence that, as compared with students whose teachers are uncertified, students achieve at higher levels in mathematics when they have teachers who hold standard certification in mathematics (the same was true to a somewhat lesser extent in science), they emphasized their finding that, "Contrary to conventional wisdom, mathematics and science [students] who have teachers with emergency credentials do no worse than students whose teachers have standard teaching credentials." This article critiques the methodological grounding for this finding and presents additional data on the characteristics of the small sub-sample of teachers in NELS data base who held temporary and emergency credentials. It finds that most of these teachers have qualifications resembling those of teachers with standard certification, and that those who have more education training appear to do better in producing student achievement.

Darling-Hammond, L., Chung, R., & Frelow, F. (2002). Variation in teacher preparation: How well do different pathways prepare teachers to teach? *Journal of*

Teacher Education, Vol 53, No. 4, pp. 286-302.
http://jte.sagepub.com/content/53/4/286.abstract

Peer reviewed.

This study examines data from a 1998 survey of nearly 3,000 beginning teachers in New York City regarding their views of their preparation for teaching, their beliefs and practice, and their plans to remain in teaching. The findings indicate that teachers who were prepared in teacher education programs felt significantly better prepared across most dimensions of teaching than those who entered teaching through alternative programs or without preparation. Teachers' views of their preparation varied across individual programs, with some programs graduating teachers who felt markedly better prepared. Finally, the extent to which teachers felt well prepared when they entered teaching was significantly correlated with their sense of teaching efficacy, their sense of responsibility for student learning, and their plans to remain in teaching.

Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does teacher preparation matter? Evidence about teacher certification, Teach for America, and teacher effectiveness. *Education Policy Analysis Archives, Vol. 13, No. 42.* http://epaa.asu.edu/epaa/v13n42/.

Peer Reviewed.

This study examines whether certified teachers are, in general, more effective than those who have not met the testing and training requirements for certification using a large student-level data set representing over 132,000 students and 4,400 teachers from Houston, Texas that links student characteristics and achievement with data about their teachers' certification status, experience, and degree levels from 1995-2002. The study also examines whether Teach for America candidates-recruits are as effective as similarly experienced certified teachers. In a series of regression analyses looking at 4th and 5th grade student achievement gains on six different reading and mathematics tests over a six-year period, the study finds that certified teachers consistently produce stronger student achievement gains than do uncertified teachers. These findings hold for TFA recruits as well as others. Controlling for teacher experience, degrees, and student characteristics, uncertified TFA recruits are less effective than certified teachers, and perform about as well as other uncertified teachers. TFA recruits who become certified after 2 or 3 years do about as well as other certified teachers in supporting student achievement gains; however, nearly all of them leave within three years. The report concludes that "teachers' effectiveness appears strongly related to the preparation they have received for teaching".

Darling-Hammond, L. (2009) *Educational Opportunity and Alternative Certifications: New Evidence and New Questions.* **Stanford Centre for Opportunity Policy in Education.** http://edpolicy.stanford.edu/pages/pubs/pub_docs/mathematica_policy_brief.pdf

This policy brief examines a number of studies in regard to the impact of certification and alternative certification, concentrating in particular on the Mathematica study by Constantine, Player, Silva, Hallgren, Grider and Deke, (2009, above). It discounts the claim that the evidence from the study can be interpreted to mean that alternatively certified teachers perform comparably to traditionally certified ones, pointing out that both traditional and alternative students in the hard-to-staff schools selected for the study had less training than

most teachers nationally, and neither group was highly effective. The career and recruitment practices of such schools made them less attractive to work at, meaning that even traditionally certified teachers are those more likely to be brand new, assigned to teach out of field, or low performers in the licensure exam. Furthermore, the study did not evaluate the effects on performance of the coursework candidates had actually taken and did not identify the aspect of teacher preparation that lead to teacher effectiveness. The paper also examined a number of studies which demonstrate a strong link between qualifications and student outcomes, as well as examining the evidence as to what makes teacher education courses effective.

Decker, P.T., Mayer, D.P., & Glazerman, S. (2004). *The Effects of Teach For America on Students: Findings from a National Evaluation.* **Princeton, NJ: Mathematica.**

This study examined the student achievement results for 41 Teach for America teachers and 57 beginning and experienced comparison teachers teaching grades 1-5 in the same schools, based on gains scores on the Iowa Tests of Basic Skills in reading and mathematics. Statistical controls were also limited by the small sample size.

In this study, the comparison group had even less preparation for teaching than the TFA group. The study's authors note: "Compared with a nationally representative sample of teachers, the control teachers in the schools in our study had substantially lower rates of certification and formal education training." Whereas 100 percent of TFA members had had some student teaching prior to entering classrooms, this was true for only 47 percent of other novice teachers (with three or fewer years of experience) and only 71% of the overall comparison group. Whereas 51% of TFA teachers were certified by the end of the study year, only 38% of novice control teachers were certified.

Compared to this underprepared group, TFA teachers' students showed gains similar to those of comparison teachers in reading and better in mathematics, though students' scores remained low overall.

TFA teachers showed a positive impact on student achievement relative to the comparison group only when they had obtained certification in their 2nd and later years in the classroom. First year TFA teachers did not have a positive impact in either mathematics or reading.

This study does not compare TFA graduates with qualified teachers, and its findings are that TFA teachers are either no better or only marginally better than unqualified and inexperienced teachers.

Easton-Brooks, D, & Davis, A. (2009). Teacher Qualification and the Achievement Gap in Early Primary Grades. *Education Policy Analysis Archives,* **Vol. 17 No. 15.**
http://epaa.asu.edu/ojs/article/view/17

Peer reviewed.

The purpose of this study was to examine the differential effects of teacher qualifications on the reading achievement of African American and European American students as they move from kindergarten to third grade. The study used value added model (VAM) techniques based on the Early Childhood Longitudinal Study, Kindergarten through Grade 5, a longitudinal data collection project funded by the U.S. Department of Education which included

approximately 22,000 children entering kindergarten in 1998 through fifth grade in 2003. After controlling for student background variables, it found that students with a certified teacher for most of their early school experience scored higher in reading than students who did not have a certified teacher. In addition, certification was associated with slightly narrowing the academic gap between African American and European American students across early elementary grades.

Fetler, M. (1999). High school staff characteristics and mathematics test results. *Education Policy Analysis Archives, Vol. 7, No.* **9.** http://epaa.asu.edu/epaa/v7n9.html

Peer reviewed.

This study of 795 Californian high schools serving 1.3 million students examines the relationship between teacher skill, experience and qualification on student achievement in mathematics. It finds that "after controlling for poverty, teacher experience and preparation significantly predict test scores" and that "Schools with more experienced and more highly educated mathematics teachers tended to have higher achieving students. Schools with higher percentages of teachers on emergency permits tended to have lower achieving students."

Glass, G. V. (2008). *Alternative Certification of Teachers.* **Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit.** http://epicpolicy.org/publication/alternative-certification-of-teachers

Peer reviewed.

This paper looks at broader issues relating to the employment of uncertified teachers (both TFA and otherwise), noting it had increased in the previous ten years, and that uncertified teachers tend to be clustered in poor urban schools with high minority enrolments. It does not undertake a study of its own into qualification and teacher effectiveness, but quotes a number of other studies to conclude that alternatively certified teachers are less effective than qualified ones. It notes that "one of the engines driving the alternative certification movement is the desire to reduce the cost of public education", and also attributes the movement to, "an increasingly influential ideology of free-market capitalism and anti-government regulation". It states that, "the [alternative certification] movement threatens to de-skill the profession of teaching and even to devalue public education". The paper questions the effectiveness of studies based on achievement test data and calls for more studies based on "the lived experience of beginning teachers".

Goe, L. (2002). Legislating equity: The distribution of emergency permit teachers in California, *Education Policy Analysis Archives,* **Vol. 10, No. 42.** http://epaa.asu.edu/epaa/v10n42/

Peer reviewed.

This study examines the impact of teachers on emergency permits in Californian schools on student learning, which it examines in the context of other contributors to student achievement such as socio-economic status and school size. It concludes that once other factors have been controlled for, "There is a significant negative relationship between the percentage of teachers on emergency permits [ie unqualified teachers] and student achievement at the school level in California schools." It proposes a set of initiatives that

attempt to decrease the need for emergency permit teachers and ensure that those that must be hired due to shortage conditions have the support they need to become credentialed teachers.

Goldhaber, D. D., & Brewer, D. (2000). Does teacher certification matter? High school teacher certification status and student achievement. *Educational Evaluation and Policy Analysis,* **Vol. 22, No. 2, pp. 129–146.** http://epa.sagepub.com/content/22/2/129.abstract

This study claims to empirically test how 12th-grade students of teachers with probationary certification, emergency certification, private school certification, or no certification in their subject area compare relative to students of teachers who have standard certification in their subject area. In mathematics, it finds teachers who have a standard certification have a statistically significant positive impact on student test scores relative to teachers who either hold private school certification or are not certified in their subject area. It claims that contrary to conventional wisdom, mathematics and science students who have teachers with emergency credentials do no worse than students whose teachers have standard teaching credentials.

However, see Darling-Hammond, Berry, & Thoreson's response (2001) above.

Greenberg, E., Rhodes, D., Ye, X., & Stancavage, F. (2004). *Prepared to teach: Teacher preparation and student achievement in eighth-grade mathematics.* **American Institutes for Research. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.** http://www.air.org/news_events/documents/AERA2004PreparedtoTeach.pdf

This paper uses data from the 2000 math NAEP in relation to four characteristics of teacher qualification: certification, college or graduate school major; highest degree; and experience.

Researchers found that teacher certification was strongly associated with higher student scores, as was a major or minor in either mathematics or mathematics education. They did not, however, find significant associations between higher degrees of education or teaching experience and student achievement.

Whilst finding that high-poverty students were more likely to have teachers who were uncertified and lacked a mathematics major or minor than their peers, it also found that when high-poverty students were taught by teachers who were fully certified or had a mathematics or mathematics education major, their scores were higher than those whose teachers lacked these characteristics.

Greenwald, R., Hedges, L., & Laine, R., (1996). The Effect of School Resources on Student Achievement. *Review of Education Research,* **Vol. 66, No. 3, pp. 361-396.** http://www.jstor.org/pss/1170528

Peer reviewed.

This article critiques the early work of Hanushek, particularly the claims that student resources are not are not related to improved student outcomes. Unlike Hanushek, it finds a strong correlation between resources and student achievement. It also critiques Hanusheks' methodologies, including meta analysis and 'vote counting', to question and reject a number of Hanusheks' findings, including regarding the importance of teaching qualifications.

Hanushek, E., (1986). The Economics of Schooling: Production and Efficiency in Public Schools, *Journal of Economic Literature,* **24(4), 1141-1177.**
http://edpro.stanford.edu/hanushek/admin/pages/files/uploads/economics%20of%20schooling.JEL.pdf

Peer Reviewed.

Using a meta-analysis of a number of other studies, this early paper made a number of claims regarding the 'efficiency' of public education in the US, including the claims that lower class sizes, greater resources and teacher qualifications do not impact upon student learning. Hanushek's methodology, use of evidence and findings have been widely contested, but he has been influential in formulating economical rationalist and conservative positions in regard to these matters.

Hanushek, E., (2003). The Failure of Input-based Schooling Policies. *The Economic Journal,* **Vol. 113, February 2003, pp. 64-98.**
http://edpro.stanford.edu/Hanushek/files_det.asp?FileId=93

Peer reviewed.

A more recent paper by Hanushek that again seeks to demonstrate that the educational outcomes of students are not enhanced by greater resourcing. Amongst other things it claims that 'teacher quality' has a considerable impact upon the educational achievement of students, but that such quality is not related to teacher education and qualification. Once again, such claims have been widely contested.

Hairrell, A., Ruply, W., Edmonds, M., Larsen, R., Simmons, D., Willson, V., Byrns, G., Vaughn, S. (2011). Examining the Impact of Teacher Quality on Fourth-Grade Students' Comprehension and Content-Area Achievement. *Reading & Writing Quarterly,* **v27 n3 p239-260.**
http://www.tandfonline.com/doi/abs/10.1080/10573569.2011.560486#preview

This study examined the effects of dimensions of teacher quality on students' comprehension and vocabulary performance. Participants were 36 teachers and their respective 679 students in 2 medium-size school districts in central Texas, both of which served high proportions of children from low-socioeconomic status households. The study examined the following dimensions of teacher quality: teacher qualifications, instructional practices, quality of strategy use, treatment fidelity, and instructional effectiveness. It used student measures of reading comprehension, content vocabulary, and social studies knowledge to explore the effects of teacher quality. Teachers' education, fidelity, and indicators of teacher quality were found to be significantly related to student outcomes on a standardized measure of reading comprehension.

Heilig, J.V. & Jez, S.J. (2010). *Teach For America: A Review of the Evidence.* **Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit.** http://epicpolicy.org/publication/teach-for-america

Peer reviewed.

This paper reviews a variety of studies and papers to conclude that the students of novice Teach For America teachers perform significantly less well in reading and mathematics than those of credentialed beginning teachers. It also notes a number of drawbacks to the program, such as costs associated with the high degree of turnover and attrition of TFA graduates.

Humphrey, D.C., Koppich, J.E., & Hough, H.J. (2005, March 3). "Sharing the wealth: National Board Certified Teachers and the students who need them most." *Education Policy Analysis Archives*, 13(18). http://epaa.asu.edu/ojs/article/view/123

Peer reviewed.

This article explores the distribution of a subset of teachers, namely, those who are National Board Certified in the US. The research finds that, with the exception of California, Board Certified Teachers are not equitably distributed across schools that serve different populations of students. In five of the six states examined, poor, minority, and lower performing students are far less likely to benefit from the teaching of an NBCT than are their more affluent, majority, higher performing peers.

Kane, T, J, Rockoff, J. E, & Staiger, D. (2008). What Does Certification Tell Us About Teacher Effectiveness? Evidence from New York City. *Economics of Education Review*, Vol. 27, No. 6, pp. 615-631. http://www.nber.org/papers/w12155

Peer reviewed.

Using the same data base as Boyd and colleagues New York City study, this study compared entrants into New York City schools by different categories of initial pathway and certification status. Like the Boyd et al., study, this study found that, in math and reading, students of 1st year teachers from TFA, the NYC Teaching Fellows, and other uncertified teachers did worse than those of 1st year teachers who were "regularly certified." It found this difference to be relatively small, leading them to conclude that, "On average, the certification status of a teacher has at most small impacts on student test performance." However, the authors include teachers licensed through "transcript review" and temporary permits in the same group as college-prepared teachers, thus minimising the effect of teacher preparation.

They also found that the negative effects were generally reduced or eliminated in math as teachers finished their training and certification and gained experience. However, in reading, the initially uncertified groups of teachers continued to have a negative effect for all 3 years (for Teaching Fellows and other uncertified teachers) and for 2 of the 3 years (for TFA).

Laczko-Kerr, I., & Berliner, D. (2002). *The Effectivness of "Teach for America" and Other Under-certified Teachers on Student Academic Achievement: A Case of Harmful Public Policy.* http://epaa.asu.edu/ojs/article/view/316/442

Peer reviewed.

In this study the academic achievements of students taught by under-certified primary school teachers were compared to the academic achievements of students taught by regularly certified primary school teachers. The sample of under-certified teachers included emergency, temporary and provisionally certified teachers. One subset of these under-

certified teachers was from the national program "Teach For America (TFA)." Results indicate 1) that students of TFA teachers did not perform significantly different from students of other under-certified teachers, and 2) that students of certified teachers out-performed students of teachers who were under-certified. This was true on all three subtests of the SAT 9—reading, mathematics and language arts. In reading, mathematics, and language, the students of certified teachers outperformed students of under-certified teachers, including the students of the TFA teachers, by about 2 months on a grade equivalent scale. Students of under-certified teachers make about 20% less academic growth per year than do students of teachers with regular certification. Traditional programs of teacher preparation apparently result in positive effects on the academic achievement of low-income primary school children.

Leslie G. Vandevoort, Audrey Amrein-Beardsley, and David C. Berliner, (2004) National Board Certified Teachers and Their Students' Achievement. *Educational Policy Analysis Archives, Vol. 12 No. 46.* http://epaa.asu.edu/epaa/v12n46.

Peer reviewed.

This study compares the academic performance of students in the elementary classrooms of 35 National Board Certified teachers and their non-certified peers, in 14 Arizona school districts. A major component of the requirements for certification is teacher qualification. Four years of results from the Stanford Achievement Tests in reading, mathematics and language arts, in grades three through six, were analysed. In the 48 comparisons (four grades, four years of data, three measures of academic performance), using gain scores adjusted for students' entering ability, the students in the classes of National Board Certified Teachers surpassed students in the classrooms of non-Board certified teachers in almost three quarters of the comparisons. The gains made by students of Board Certified teachers were over one month greater than the gains made by the students of non-Board certified peer teachers. Teachers identified through the assessments of the National Board for Professional Teaching Standards are, on average, more effective teachers in terms of academic achievement, one of the many outcomes of education for which teachers are responsible.

Lubienski, S., Lubienski, C., & Crane, C., (2008). Achievement Differences and School Type: The Role of School Climate, Teacher Certification, and Instruction. *American Journal of Education,* **Vol. 115, No. 1, pp. 97-138.** http://www.jstor.org/pss/10.1086/590677

Peer reviewed.

This study examines recent US analyses which challenge common wisdom regarding the superiority of private schools relative to public schools, raising questions about the role of school processes and climate in shaping achievement in different types of schools. While holding demographic factors constant, this multilevel analysis of National Assessment of Educational Progress (NAEP) mathematics data on over 270,000 fourth and eighth graders in over 10,000 schools examines differences among schools on five critical factors: (1) school size, (2) class size, (3) school climate/parental involvement, (4) teacher certification, and (5) instructional practices. The study provides nationally representative evidence that both teacher certification and some reform-oriented mathematics teaching practices correlate positively with achievement and are more prevalent in public schools than in demographically similar private schools. Additionally, smaller class size, more prevalent in private schools, is significantly correlated with achievement.

National Commission on Teaching & America's Future, (1996) *What Matters Most: Teaching For America's Future.* http://www.teaching-point.net/Exhibit%20A/What%20Matters%20Most.pdf

This 1996 report presented a proposal for a strategy for improving education in the US by "recruiting, preparing, and supporting excellent teachers in all of Americas schools". Central to its recommendations were three principals: 1. What teachers know and can do is the most important influence on what students learn. 2. Recruiting, preparing, and retaining good teachers is the central strategy for improving our schools. 3. School reform cannot succeed unless it focuses on creating the conditions in which teachers can teach, and teach well. The report presents evidence from the literature that "studies over the last 30 years have consistently shown that fully prepared teachers are more highly rated and more effective" than unqualified ones. Chief amongst its recommendations is to "Increase the ability of low-wealth districts to pay for qualified teachers, and insist that districts hire only qualified teachers." It also contains recommendations concerning standards and accreditation for teacher education courses, licensing of teachers based on qualifications and subject knowledge, improving career paths and creating "schools that are organized for student and teacher success".

National Council for Accreditation of Teacher Education. (2006). *What Makes a Teacher Effective?*
http://www.ncate.org/LinkClick.aspx?fileticket=JFRrmWqa1jU%3d&tabid=361

The US National Council for Accreditation of Teacher Education (NCATE) advances an agenda that calls for extensive teacher preparation. This brochure explains in great detail why all educators need rigorous training in order to perform their jobs effectively. The publication references several examples of classroom-derived research, all of which argues persuasively that well-qualified teachers perform their job more efficiently, have better classroom management skills, and are less likely to leave the profession. In addition, the students of well-qualified teachers consistently perform better on standardised tests and assigned class work.

Neild, R, Farley-Ripple, E, Byrnes, V. (2009) The Effect of Teacher Certification on Middle Grades Achievement in an Urban District. *Educational Policy, Vol. 23 No. 5, pp. 732-760.* http://epx.sagepub.com/content/23/5/732.abstract

Peer reviewed.

This paper uses a data set from an urban district to estimate the impact of different certifications (and lack of certification) on middle-grades students' learning gains in mathematics and science. It finds that in mathematics, students with elementary and secondary-certified teachers outscore those with uncertified teachers and those who are certified in special education. Especially strong effects are seen in science, where students with secondary science-certified teachers substantially outscore those with any other kind of teacher.

Suh, T., & Fore, R., (2002). *The National Council on Teacher Quality: Expanding the Teacher Quality Discussion.* **ERIC Digest.**

http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearc h_SearchValue_0=ED477730&ERICExtSearch_SearchType_0=no&accno=ED477730

According to this paper, "Research suggests that teacher quality is the single most important factor in determining student achievement and that the impact of a teacher is cumulative. Students with less exposure to qualified teachers are far less likely to achieve academic success than students with more exposure. Research also shows that teachers majoring in the subject areas taught have a more positive impact on student achievement than teachers majoring in out-of-field disciplines."

Vandevoort, L., Amrein-Beardsley, A., & Berliner, D., (2004). National Board Certification and Their Students' Achievement. *Education Policy Analysis Archives*, **Vol. 12, No. 46.** http://epaa.asu.edu/ojs/article/view/201

Peer reviewed.

This study compares the academic performance of students in the elementary classrooms of 35 National Board Certified teachers and their non-certified peers, in 14 Arizona school districts. Four years of results from the Stanford Achievement Tests in reading, mathematics and language arts, in grades three through six, were analysed. In the 48 comparisons (four grades, four years of data, three measures of academic performance), using gain scores adjusted for students' entering ability, the students in the classes of National Board Certified Teachers surpassed students in the classrooms of non-Board certified teachers in almost three quarters of the comparisons. Almost one-third of these differences were statistically significant. The gains made by the students of non-Board certified peer teachers. Teachers identified through the assessments of the National Board for Professional Teaching Standards are, on average, more effective teachers in terms of academic achievement, one of the many outcomes of education for which teachers are responsible.

Walsh, K, (2001). *Teacher Certification Reconsidered: Stumbling for Quality.* **Baltimore: The Abell Foundation.**
http://www.nctq.org/p/publications/docs/ed_cert_1101_20071129024241.pdf

This report, issued in October, 2001 by the Baltimore-based Abell Foundation, purports to prove that there is "no credible research that supports the use of teacher certification as a regulatory barrier to teaching" and urges the discontinuation of certification in Maryland. It claims to have examined "all of the studies that training and licensure proponents use to bolster their case". but found the great majority to be flawed, inconclusive, or misleading. In July, 2002, the U.S. Secretary of Education cited the Abell Foundation paper in his Annual Report on Teacher Quality as the sole source for concluding that teacher education does not contribute to teacher effectiveness. The Secretary's report then recommended that requirements for education coursework be eliminated from certification standards, and attendance at schools of education and student teaching be made optional.

Linda Darling-Hammond has provided an extensive rebuttal to these claims (Darling-Hammond, 2002, above).

Appendix 3

The Kelvin Grove Teacher Education Centre of Excellence

There has been a conversation that has been ongoing amongst members of the teaching profession in regards to Teacher Education and new and beginning teachers that has gained prevalence in the last few years.

A number of initiatives have come into existence to address these concerns and these are being led by a different government branches and sectors.

Examples of these include the Improving Teacher Quality National Partnership Agreement and the *Teacher Education and Induction Review* completed by Brian Caldwell and David Sutton which was commissioned by the Department of Education and Training, Queensland.

In July 2011, the first group of students began attending the Kelvin Grove Teacher Education Centre of Excellence. This program is a joint initiative of the Queensland University of Technology, Kelvin Grove and Kelvin Grove State College. It is being funded as part of the Improving Teacher Quality National Partnership Agreement. It is a model of Teacher Education that is attempting to address the issues raised in the past about Teacher readiness as well as key findings in the *Teacher Education and Induction Review:*

- *That every teacher education institution that offers pre-service education have a partnership with one or more schools that are the education equivalent of teaching hospitals.*
- *That teachers entering the profession have a reduced teaching load of no more than 0.8 for at least the first year of their employment.*
- *That teachers entering the profession have at least one trained mentor for the first year of their employment. Mentors should have a reduced class allocation to enable them to work with those they are mentoring.*

So...What is the Kelvin Grove Teacher Education Centre of Excellence?

The Kelvin Grove Teacher Education Centre of Excellence (KGTECE) is a new initiative that is being run as a partnership between the Queensland University of Technology (Kelvin Grove) and Kelvin Grove State College (KGSC) as part of the *Improving Teacher Quality National Partnership.*

Background

A facilitation reform contained within the *Improving Teacher Quality National Partnership Agreement* is the establishment of "School Centres of Excellence" which are designed to provide high quality field experiences for pre-service teachers and professional development for teachers.

Centres of Excellence will enable sustained partnerships to be fostered between schools and higher education providers to embed a clinical approach to pre-service teacher education and to provide pre-service teachers with extended experiences in school environments. Centres of Excellence will:

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- provide quality supervision, mentoring and support to pre-service teachers;
- strengthen linkages between pre-service education programs and the transition to employment as teachers;
- provide ongoing professional development for teachers;
- promote and demonstrate quality teaching which improves student learning outcomes; and
- work with other schools to strengthen the quality of teaching and to improve student learning outcomes.

What is the purpose of the Kelvin Grove Teacher Education Centre of Excellence?

The purpose of the Kelvin Grove Teacher Education Centre of Excellence is to provide an enhanced course for 25 high achieving Education students in their third year of study. This course will induct and prepare new teachers for work, specifically in Education Queensland schools, in the early, middle and senior phases.

The program will consist of units managed through the KGTECE that will provide students with further opportunities for service learning in schools with an individual, trained Teacher Mentor, as well as other work in tutorials designed to provide students with Education Queensland specific knowledge. The Pre-Service Teachers will have experienced a comprehensive, Education Queensland specific induction program before they enter their school for their final field experience. This will ensure that they can concentrate on their pedagogy in the classroom and not the bureaucracy of the Department.

Successful students will fulfil practicum requirements in state schools in inner Brisbane and will complete paid internships in the South West and Darling Downs (Semester 8). These students will be appointed to an Education Queensland school in the Metropolitan Region, and will begin their teaching in the South West and Darling Downs Region.

What does participating in the Kelvin Grove Teacher Education Centre of Excellence mean for students?

KGTECE pre-service teachers will:
- participate in a KCTECE program throughout Semester 6 & 7 of their degree for 2 hours per week. Learning outcomes and assessment will be drawn from two designated QUT units for the 4th year progression as negotiated by QUT liaison academics, the KCTECE Head of Mentoring, and the QUT unit coordinators. Students will be required to enrol in these units. Students who demonstrate satisfactory ongoing participation and commitment to the KGTECE in Semester 6 of their degree will have the QUT CPS fees for the two designated units waived. Further information about enrolment in these subjects will be provided to successful applicants, however students completing ED92 who have been accepted into the KGTECE will be required to enrol in SPB004 (usually an elective) in the first semester of their 4th year to be completed through the centre.

Early Childhood ED92	Primary ED 91	Secondary ED 90
SPB004: Teaching Students with Learning Difficulties *Required Text:* Westwood, P. (2008) *What teachers need to know about learning difficulties*. Camberwell, VIC: Acer Press EDB014: Early Childhood Field	EDB004: Teaching and Learning Studies 4: Inclusive Education *Required Text:* Keeffe, M., Carrington, S. (Eds.) (2007). *Schools and diversity* (2nd. ed.) Frenchs Forest, NSW: Pearson Education Australia	EDB004: Teaching and Learning Studies 4: Inclusive Education *Required Text:* Keeffe, M., Carrington, S. (Eds.) (2007). *Schools and diversity* (2nd. ed.) Frenchs Forest, NSW: Pearson Education Australia

- participate in a range of service experiences at a KCTECE school with their individual teacher mentor for a minimum of 2 hours per week during the university semester. Students will be asked to demonstrate the quality of their learning via evidence collected in a professional portfolio and culminating suitability rating interview for employment with Education Queensland.

What benefits are there for KGTECE students?

Successful students will:
- be supported through the KGTECE as well as by an individual, trained Teacher Mentor on a school site;
- participate in a range of coursework and service learning experiences designed to enhance their skills and knowledge to teach in an Education Queensland school;
- be appointed to an Education Queensland school during Semester 8, Term 3 if they have a GPA of 6.0 or higher in subjects managed by the KCTECE and on the condition that they complete the first two years of their teaching service in the South West and Darling Downs Region;
- be offered a paid internship in an Education Queensland school in the South West and Darling Downs Region
- have the QUT Commonwealth Supported Place fees for the two designated units (for their degree) waived; and
- return to the appointed Metropolitan Region school in 2015 upon successful completion of their teaching service in the South West and Darling Downs Region.

What does it mean to be a KGTECE Teacher Mentor?

The Kelvin Grove Teacher Education Centre of Excellence will utilise the expertise of experienced teachers to provide ongoing support and professional growth opportunities to enhance the skills and effectiveness of pre-service teachers.

Responsibilities of a KGTECE Teacher Mentor

The role of a Teacher Mentor will differ between mentors and their pre-service teacher. The Teacher Education Done Differently: Mentoring for Effective Teaching training will provide Teacher Mentors (TM) with skills and knowledge to ensure that they can effectively provide support for their Pre-Service Teacher (PST).

Professional learning and mentoring initiated by the TM may include:

- getting involved in solving specific problems about curriculum, instruction, and relationships;
- providing opportunities for classroom visits and encouraging visits to other classrooms;
- expressing positive feelings about teaching and helping the PST attain the same feelings;
- addressing the PST's thoughts about being a teacher;
- helping the PST cope with the practical details of becoming and being a teacher;
- assisting with the PST's understanding and management of the school and classroom environment;
- listening to concerns, progress and questions;
- serving as a source of ideas;
- being easily accessible, trustworthy and understanding;
- offering assistance on classroom management;
- demonstrating professional competence;
- helping expand the PST's repertoire of teaching strategies;
- scheduling time willingly with the PST; and
- providing a task-oriented focus established through a two-way interchange about goals and procedures.

The expectation of KGTECE TM's is that they will spend up to 125 hours with their PST over 12-15 months. PST's will be in the school environment for a minimum of two (2) hours per week for 9 weeks per Semester in conjunction with their unit work through the KGTECE.

Teacher Mentor's will be invited to participate in Research projects conducted by the Department of Education and Training and the Queensland University of Technology throughout the program. TM's will be provided with a 'Smartpen' to enable them to provide feedback in a supportive and efficient manner. TM's will be able to take notes, record audio and provide their notes to the PST. Further training will be provided by the KGTECE to assist the TM's to provide effective and useful feedback to the PST.

While engaging with the TM, the PST can:
- observe the TM's lesson;
- reflect on what has been observed in the lesson;
- ask questions;
- participate in the activities/lesson where required/appropriate; and
- take a lead role in working with individual students/groups when directed by the TM.

Other activities where the mentee can be involved at the school level would include:
- negotiated times for visits between the TM and PST;
- work shadowing of other teaching and non-teaching staff at the school;
- participation in student-focused activities outside the classroom, within the school such as Athletics Carnival, Cross Country, Swimming Carnival, music/drama performances, debating, sporting teams, school camps etc; and
- participating in school-based activities e.g Playground Duty, Bus Duty, staff meetings, faculty meetings, unit planning, Student Free Days, Professional Development opportunities etc.

These are to be negotiated with the PST.

Benefits for the KGTECE TM

There are a range of financial and professional benefits for KGTECE Teacher Mentors who participate in this program. School-based incentives must be determined after a meeting of the school's LCC.
These include:
- incentives to access Professional Development which could include the equivalent of five (5) TRS days banked into an individual PD account at the TM's school to be accessed for PD that the TM wishes to attend. It may also be used for the purchase of resources or payment towards Professional Associations. This will be paid into the PD account in two instalments and will be calculated based on the record of the time the TM has spent with the PST which is provided to the KGTECE;
- QUT Field Experience payments if students complete any Field Experience at any time with their Teacher Mentor throughout the three (3) semesters;
- participation in TEDD:MET training which will make the TM's qualified facilitators of this training as well as 10 hours towards their Queensland College of Teachers Continuing Professional Development. Further CPD hours can be claimed throughout the program.;
- the opportunity to work with a high achieving pre-service teacher/PST who has been accepted into the program through a rigorous application and interview process;
- evidence towards Senior Teacher and Experienced Senior Teacher pay points; and
- the potential for TM's to access benefits in line with the National Professional Standards after these have been announced e.g. Highly Achieving Teacher and Lead Teacher.