Changes & challenges

CONFERENCE PROCEEDINGS

Changes and challenges:
The power of education
to build the world to
which we aspire

Australian College of Educators

Editorial

The theme of this year's National Conference of the Australian College of Educators (ACE*): Challenges and changes: The power of education to build the world to which we aspire*. It has provided a unique opportunity for education professionals to carefully consider and propose papers, workshops, and poster sessions to stimulate discussion and debate about this significant topic as participants from all sectors and at all levels of the education community gather at this two-day event in Sydney on 26 and 27 September 2016.

The ACE 2016 National Conference Proceedings include Keynote Addresses and Reviewed Paper Presentations, including the winning Paper of the ACE/ASG Student Educator *Writing the future* National Award, and two Reviewed Paper Presentations that provide reflections from the field.

In addressing the theme, the *Call for Papers* invited educators to submit abstracts—outlining research, descriptions of teaching practices or programs, and position papers for Reviewed Paper Presentations or more interactive and informal extended discussions, workshops, and demonstration sessions for Interactive Workshop Session—that, for example, considered:

- The influence and power of education to build a better world;
- The challenges for educational leadership and governance;
- New approaches to teaching and learning; and
- Promising theories to positively influence students, communities, and governments.

Over 60 abstracts were received in total, almost equally divided between Reviewed Paper Presentations and Interactive Workshop Sessions; and, almost without exception, they were of a very high quality and interest value. Twenty-five of these are being presented at the conference in combined presentations, workshop sessions, and poster displays. These, together with the Keynote presentations, book launch, discussion panel, provocation, and parallel career-entrant strand, have combined to offer presenters and participants alike, a stimulating, memorable, and thought-provoking two-days.

An expert review panel of education academics and practitioners was established to review the abstracts. It comprised:

- Dr Kerrie Ikin, Chair

- Dr Michael Bezzina, FACE

- Dr Philip Brown, FACE

- Professor Chris Davison

- Professor Glenn Finger, FACE

- Dr Phil Lambert, FACE

- Ms Jenny Lewis, FACE

- Dr Warren Marks, OAM, FACE

- Dr Norman McCulla, FACE

- Dr Julie Rimes, FACE

- Dr Jim White, PSM

The panel reviewed all abstracts, recommended those for inclusion in the conference, and provided constructive feedback to all authors. Presenters of Reviewed Papers were given the opportunity to develop these into full papers for inclusion in this publication and the papers were then carefully reviewed by panel members.

The contributions of each member of the review panel in terms of time, care, wisdom, and acumen were invaluable and are gratefully acknowledged and I thank each one of them most sincerely.

I thank all presenters for the time they have taken in preparing their papers, workshops, and posters for inclusion in this year's National Conference. I sincerely wish all attendees an enjoyable and rewarding conference and trust that following the conference, the reading and rereading of this publication will not only bring back good memories but also continue to stimulate debate about 'the power of education to build the world to which we aspire'.

Dr Kerrie Ikin

Editor

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Welcome

THE HON. BRONWYN PIKE, MACE
ACE National President

Welcome to the Australian College of Educators 2016 National Conference 'Changes and challenges: The power of education to build the world to which we aspire'.

The College is proud to be presenting this Conference to education professionals from all sectors and systems across the country. There are many firsts being delivered at this year's Conference based on the key theme of changes and challenges.

For the first time Australian College of Educators will live-stream two of our prominent keynote speakers to provide members from anywhere in Australia with real-time access to Conference material. The Conference is also delivering a dedicated early career educators stream that will culminate in a *PitchFest* of ideas and concepts for development.

The Conference is not only delivering excellent information and research to attendees, it is also providing an opportunity to build relationships and networks with other leaders in the education profession. It is through making these connections and working collaboratively, and actively with the College that our members will become change agents for creating the world to which we aspire.

It is an interesting time to be an educator in Australia. The changing education, economic, and social environment is creating many challenges for our profession. With these challenges, however, come opportunities, great opportunities.

It should go without saying that any and all aspirations for the future from an economic, social, environmental, and community perspective will, undoubtedly, be intrinsically linked to education. A bold statement, perhaps, but simply look at the data.

The UN Secretary-General's Global Initiative on Education notes that:

- For every year at school, earnings increase by **10 per cent**
- If a country's population is educated by one extra year on average, its annual per capita GDP growth gets a **25 per cent** boost
- If all women had primary education, almost 1 million child deaths could be averted. If all women had secondary education, child mortality would be halved.

At the present time there is much focus on teachers/educators and their education. Criticisms have been levelled at the profession and much debate has been had at state and national levels to attempt to 'fix' this 'problem'. As a profession we are acutely aware that the 'problem' is more complex and deeply rooted than what is being presented in the media. Teacher education is a critical component of building a strong, vibrant, and adaptable education system that can face the challenges and changes of the world in which we now operate. But teacher education is only one component of the broader set of challenges facing education in Australia.

As leaders in the education profession we must work to ensure these broader issues are not lost in the current 'blame game' agenda. Drawing once again from the UN Secretary-General's Global Initiative on Education, the College and its members must ensure that quality education is achieved in a number of ways including,

- Training, equipping, valuing, and supporting quality educators
- Improving data collection and assessments, setting the right policy priorities, and adapting teaching and learning practices
- Creating curricula that reflect transformative education for an equitable, just, and sustainable world
- Transforming classrooms into collaborative, community-supported settings
- Providing sufficient, engaging, and relevant learning materials
- Increasing investment in education.

It is imperative that there should be a united, powerful, and relevant 'voice' for the education profession across the country. In order to achieve fundamental change in the way that education is approached it is essential that educators have a truly representative organisation advocating on their behalf. The Australian College of Educators is this organisation.

The College and its members need to be at the forefront of the education debate, not only here in Australia, but globally. We need to ensure that policy-makers and the broader community are clear about the essential role educators play in shaping the future. As members of the education profession, we need to analyse, assess, and provide direction and solutions for the education sector in Australia. Our profession and our College must lead the public debate on education challenges and changes, debate based on research and evidence derived from the Australian experience.

The College is a truly independent, united, and broadly representative association for the education profession in Australia. It is through engagement with the College that professionals from all sectors, systems, and levels can actively contribute to setting the education agenda.

By attending and participating in this National Conference you are leading the 'change movement' and have the opportunity to contribute actively to the broader education agenda both here and overseas.

The Australian College of Educators is your professional association. By working together, you, the educators of Australia, will ensure that the profession is ready to take on the challenges facing education and truly contribute to building a world to which we all aspire.

I hope you enjoy your time at the 2016 National Conference.

The Hon. Bronwyn Pike, MACE
ACE National President

Keynotes

The best possible start: Why investment in quality early childhood education and care matters

MS RACHEL HUNTER

BA, DipEd, BEdSt, MBA, DUniv
Deputy Chancellor, Griffith University and former Chair for the board
of the Australian Children's Education & Care Quality Authority (ACECQA), NSW

Biography

Rachel is the Chair of the Board of Children's Health Queensland Hospital and Health Services and the former Chair of the Australian Children's Education and Care Quality Authority (ACECQA).

She was formerly the Chair of QCOMP and of Legal Aid Queensland; and Deputy-Chair of the Queensland Performing Arts Trust Board. Rachel was a Governor-in-Council appointee on Griffith University Council 2000-2013; and was re-appointed in 2015.She was elected as the Deputy Chancellor in October 2015.

Rachel retired from the position of Director-General of the Department of Justice (including private and public sector industrial relations and workplace health and safety) in July 2010. Since her retirement Rachel has undertaken a range of capability reviews in public sector agencies, including Departments of Health.

Prior to her appointment as Director-General of the Department of Justice and Attorney-General in 2009, Rachel served as Director-General of the Department of Education, Training and the Arts from September 2006.

Rachel previously held the position of Director-General of the Department of Justice and Attorney-General from 2003 to 2006, when she was appointed to undertake a review of the Office of the Director of Public Prosecutions.

She also served as Queensland's Public Service Commissioner from December 2000 until November 2003. In this role, Ms Hunter led the development of a highly professional public service in the areas of organisational and executive capability and performance, public service reform and governance.

Rachel has extensive experience in the vocational, education and training sector, initially as a teacher and then in a variety of management roles. Most notably, she was the Director of the Southbank Institute of TAFE and concurrently, the Chair of TAFE Queensland. As Chair of TAFE Queensland, Rachel was the lead executive and spokesperson for the TAFE system.

Throughout her long career in the Queensland public service, Rachel has played a pivotal role in leading reform in public service policy and institutions, and shaping the education, training and justice systems in Queensland.

Rachel has an acute interest in social justice, and the role government plays in individual, community, and economic development.

Abstract

Investment in quality early childhood education and care is an investment in a child's future, and ultimately, in the productivity and prosperity of a nation. With more and more children spending the majority of their waking hours in some form of child care, the quality of services, educators, and learning experiences is of acute importance for their development and future educational success.

The fundamental premise underpinning quality reforms in early childhood education and care is that children are active learners from birth. The early years lay the foundation for a child's resilience, success as a learner, and development. Research has shown that quality education and care early in life leads to better health, education, and employment outcomes later in life.

The introduction of the Australian National Quality Framework (NQF) in 2012 was a vital first step in assuring the right of every child to a quality early learning experience. In designing the NQF Australia drew on a significant body of international research in neuroscience, child development, and early learning.

The NQF provides for nationally consistent accreditation and quality rating of more than 15 000 services providing education and child care for children from birth to 13 years of age. These services include long day care, family day care, some kindergartens (or preschools), and outside school hours' care (OSHC).

However, the introduction of the NQF is just the beginning if Australia is to address the growing levels of educational disadvantage and underperformance which are becoming increasingly evident in national and international educational rankings.

This paper will examine the background and characteristics of reforms in early childhood education and care, and argue that a high quality, high equity educational system will increasingly rely on the nationally consistent quality of children's education and care, particularly in the early years.

Background—The National Quality Framework

The NQF is underpinned by the applied Education and Care Services National Law (the National Law) and the Education and Care Services National Regulations (the National Regulations). The National Law and Regulations integrated previous regimes for child care licensing, minimum enforceable standards and quality assessment into a single, Nationally consistent regulatory model.

The National Quality Standard (NQS) is a key element of the NQF. The Standard includes seven quality areas and is the primary vehicle for regulating, rating, and driving improvement in service quality.

The NQS also provides two nationally approved learning frameworks: Belonging, Being & Becoming—The Early Years Learning Framework for Australia which focuses on play-based learning for children birth to five; and My Time, Our Place—Framework for School Age Care in Australia which provides for school age children in outside school hours' care services.

Data and information reported by the Australian Children's Education and Care Authority (ACECQA) provides invaluable information for families, educators (in education and care and schooling), and policy makers about the current state of quality in over 15 000 services across the nation.

The positive news is that the NQF reforms are witness to a lift in quality. According to the ACECQA Snapshot (2/2016: p 10) of the 684 service reassessments undertaken, 67% resulted in an improved overall quality rating. Of the 32% of reassessments that did not result in an improved overall quality rating, almost two-thirds (64%) did result in improved performance against the elements of the NQS.

Compelling Evidence

Research has consistently demonstrated that the first months and years of life set the stage for lifelong development. Gerhard (2004: p. 18) reinforced the importance of early interactions and effective parenting, describing babies as "… the raw material for a self. Each one comes with a genetic blueprint and a unique range of possibilities. There is a body programmed to develop in certain ways, but by no means on automatic programme. The baby is an interactive project, not a self-powered one."

Neglect during the first two years of life has a profound effect on the development and health of a child. The World Health Organisation (WHO) (2007: p.7) reported that "Research now shows that many challenges in adult society—mental health problems, obesity/stunting, heart disease, criminality, competence in literacy and numeracy—have their roots in early childhood."

The National Scientific Council on the Developing Child (2016: p. 8) reported that early intervention

has the potential to at least partly remediate harm. "If appropriate intervention occurs very early—in various studies the benchmark age for removal from extreme deprivation has been identified as 6, 12, or 24 months—substantially improved functioning in cognition, attention, memory, and executive functioning can be achieved. "This evidence was most poignantly demonstrated by a follow-up study undertaken of Romanian orphans by Harvard Medical School neuroscientist Charles Nelson. (Marshall, 2014: p. 752). The study showed that the children who were placed at two years of age in foster care developed within normal ranges, contrasted with those children retained in orphanages.

In a response to the Productivity Commission's 2015 Issues Paper, ACECQA (2016: P. 4 Attach A) cited evidence which indicated that children from disadvantaged backgrounds stand to gain the most from quality education and care, improving developmental outcomes including learning skills and improved quality of life. ACECQA (2016: p. 4 Attach A) noted that children from disadvantaged backgrounds are also more vulnerable to negative impacts from poor quality services, meaning that the provision of low quality education and care can entrench disadvantage.

ACECQA findings (2016: p. 4 Attach A) also cited evidence from UK and Australian studies which demonstrated the benefits of investment in quality. A longitudinal study into preschool provision in the United Kingdom which tracked children from the age of 3 years onwards found that high quality early childhood education and care ameliorates the effects of social disadvantage and prepares disadvantaged children for success at primary school. Evidence from E4 Kids, a recent Australian longitudinal study which tracked children from the age of 3–4 years onwards similarly reported a positive relationship between the quality of a service and educational outcomes.

Maintaining Momentum

Introducing and maintaining the momentum of national quality reforms has not been easily achieved, nor will future developments. This is principally due to the complexities of a federated system of policy determination, regulation, and funding in the early childhood education and care arena.

The NQF created a national system by replacing '… a fragmented state-based system of licensing

and quality assurance arrangements with a single, cohesive national structure, merging nine regulatory and quality assurance systems into one' (ACECQA, 2016: p. 1).

Effectively the 'owners' of the NQF are the Commonwealth, State and Territory governments, with stewardship of the federated regulatory system delegated to the Ministerial Education Council. The National regulatory body, ACECQA, has a number of regulatory powers, but is principally responsible for monitoring the consistent implementation of the NQF by State and Territory regulatory bodies. Regulatory powers related to service accreditation, compliance and quality rating remain a matter for States and Territories.

The sector too is complex in configuration. According the latest ACECQA Snapshot (2/2016) there are over 15 33 services, of which 6980 (46%) are 'private for profit'; 3762 (25%) 'Private not for profit community managed'; 1850 (12%) are 'Private not for profit other organisations'; 1315 (9%) 'State/Territory and Local Government managed'; 771 (5%) 'State/Territory government schools'; 447 (3%) Independent schools'; 197 (1%) Catholic schools'; and Not stated/Other 11 (0%).

To add further complexity there is significant variability in service mix and provider scale across jurisdictions and the nation. Nationally 93% of services are centre-based, and 7% Family Day Care. The proportion of approved providers with services by size (31 March 2016) were 1% Large (25 or more services); 16% Medium (2–24 services); and 83% Small (1 service).

The Need for a Sustained Policy Focus

While Australia has lifted levels of investment in early childhood education, 2014 OECD data showed that 18% of 3-year-olds participated in early childhood education, compared with 70% on average across the OECD. Australia ranked at 34 out of 36 OECD and partner countries (OECD, 2014: p. 1).

According to O'Connell et al (2016: p. v) 'There is a mismatch between investment and opportunity in early childhood policy in Australia. The early years are a critical window for building the foundations that enable all children to become creative, entrepreneurial, resilient and capable learners. Yet current policy settings are not

meeting the needs of the children who stand to benefit most.'

O'Connell et al (2016: p viii) made five recommendations worthy of policy consideration for future investment in the accessibility and quality of early childhood education and care. They are as follows:

1. Establish affordable access to preschool as a legislated entitlement, make a permanent commitment to funding Universal Access for 4 year olds, and commence work on extending Universal Access to 3 year olds.

2. Scale up evidence-based, high-intensity programs for the most vulnerable children, prioritising the communities in each state that are in the bottom decile for developmental vulnerability in the Australian Early Development Census (AEDC).

3. Ensure the NQF is achieving its objectives and is appropriately resourced to do so, and that all services are meeting the NQS, at a minimum, by mid-2017.

4. Deliver a national early childhood data strategy that establishes the information infrastructure needed to drive policy and practice improvement into the future.

5. Commence a national campaign to strengthen family and community knowledge and beliefs about children's early learning.

Lifting the Bar and Closing the Gap

The child care sector provides a vital starting point for many children in the continuum of education. A national policy priority on quality children's education and care is vital for a high equity, high quality education system.

In Australia, 15% or 60,000 children start school developmentally vulnerable (Guardian, 2016: p. 1). This has serious implications for their successful transition to and achievement in schooling.

While ACECQA (2/2016) national data shows the same percentage of services (28%) working towards the national standard in 'least' and 'most' disadvantaged areas, communities with lower levels of school readiness have a higher proportion of services at the Working Towards NQS quality level, meaning ones that do not meet national standards, than communities where levels of

school readiness are highest (Educational opportunity in Australia 2015: p. 11).

The greatest difference in the proportion of services below the national standard is in Quality Area 1, Educational program and practice. In communities with the lowest levels of school readiness, 28.1 per cent of ECEC services fall below the national standard on this measure, compared to 20.9 per cent in communities where the level of school readiness is highest (Educational opportunity in Australia 2015: p. 11)

Lamb et al (2015: p iv) provided a picture of how young Australians meet or miss key educational milestones. 78% enter school on track in all AEDC domains, while 71.6% meet or exceed academic achievement benchmarks by Year 7, and 74% attain a Senior Certificate or equivalent in Year 12.

The data revealed that around 10% of the children who enter school developmentally vulnerable never recover. However more positively, Lamb et al noted that 'There are also points at which young Australians are behind or missing out, but recover over following stages succeeding at the following milestone' (2016: p. V). This turnaround requires sustained curriculum intervention, a positive school culture, and quality teaching.

The 2015 PISA results demonstrated that Australia continued to slip in international education rankings. However, Wilson, Dalton and Bauman (2015: p 1) reported that the real concern since 2000, was that Australian 15-year-olds' scores on reading, maths and scientific literacy have recorded statistically significant declines since 2000; that is a decline in real scores, while other countries have shown improvement.

The recent Australian Government report (2016: p. 1) on 'Quality Schools, Quality Outcomes' acknowledges that while PISA describes Australia as having a high equity, high quality education system, more needs to be done." … our performance both relative to other countries and in real terms has declined over time and there is a significant gap between our highest and lowest performing students."

The Report goes on to acknowledge that results indicate there has also been a decline in the number of high performing students in mathematics and reading, despite increased

government funding over the last decade (2016: p. 1). The Report noted that "The OECD has found that how money is allocated across the system matters more in education spending than the amount of money that is spent" (2016: p. 1).

Conclusion

The OECD (2014) has predicted that if Australia was to improve its performance on the PISA tests by 25 points, GDP would expand by 7.2 per cent; equivalent to $4.8 trillion by 2095. This requires a sustained investment in the quality of education, which starts with early childhood.

The WHO (2007: p.7) reported that "Economists now assert on the basis of the available evidence that investment in early childhood is the most powerful investment a country can make, with returns over the life course many times the amount of the original investment."

The NQF has established a foundation for ongoing quality reforms in early childhood education and care. Sustained policy focus on, and funding for quality early childhood education and care needs to be a priority if Australia is to deliver the best possible start for all children, and yield generational social and economic dividends for the Nation.

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The power of teachers in building the world to which we aspire: Breaking open the 'black box' of teacher education

PROFESSOR DIANE MAYER
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The University of Sydney

Biography

Diane Mayer is Dean of Education and Social Work at the University of Sydney. She has previously held leadership positions at Victoria University, Deakin University, the University of California at Berkeley and The University of Queensland. Her research focuses on teacher education and beginning teaching, examining issues associated with the policy and practice of teacher education and induction into the profession. She is lead CI on an ARC funded project 'Investigating the effectiveness of teacher education for early career teachers in diverse settings: A longitudinal study'. Her research and scholarship has produced monographs, book chapters, articles in international refereed journals, research reports and commissioned papers, and invited keynotes in Australia, New Zealand, Belgium, USA, Taiwan, Malaysia, Japan, the UK and China, plus numerous conference papers. She has been editor of the Routledge journal, Teaching Education for 16 years and is a member of the editorial boards of three international journals.

Abstract

In this keynote, I will aim to "unlock the 'black box' of teacher education, turn the lights on inside it, and shine spotlights into its corners, rafters, and floorboards" (Cochran-Smith, 2005, p. 8). To do this, I will first examine current global policy contexts and the "distortion and misuse of research" (Zeichner & Conklin, 2015, p. x) often used to justify various political goals and build a 'crisis discourse' as the rationale for large-scale reform agendas impacting the teaching profession. Policies linked to claims for increasing teacher quality that are being shared and borrowed across nations will be examined, especially those which threaten to curtail the professionalism of teachers and teacher educators. Then I will draw on current Australian research to understand the effectiveness of teacher education and beginning teaching as the basis for thinking about changes and challenges for positioning the teaching profession as taking a lead in our professional accountability. I conclude that educators and education researchers will need to collaborate and become more successful in collectively engaging in and with current political and policy arenas if we are to realise the full potential of the teaching profession in building the world to which we aspire.

Introduction

Government concerns about global economic competitiveness are increasingly driving large-scale reforms agendas designed to address the perceived problems of teacher quality and teacher education. The situation is often 'imagined' by many countries as necessitating the pursuit of neoliberal policies in order to 'fix' the problems (Furlong, 2013) so reform agendas usually incorporate notions of competition and consumer choice. Moreover, these agendas and the accompanying crisis discourses are regularly informed by a 'distortion and misuse of research' (Zeichner & Conklin, 2015, p. x) especially to support 'policies

and programs that would simultaneously reduce the role of colleges and universities in preparing U.S. teachers and support the expansion of the role of non-university providers' (Zeichner & Conklin, 2017).

In this talk, I focus on teacher education and early career teaching. I aim to 'unlock the "black box" of teacher education, turn the lights on inside it, and shine spotlights into its corners, rafters, and floorboards' (Cochran-Smith, 2005, p. 8), by sharing current Australian research investigating the effectiveness of teacher education and beginning teaching that proposes teacher

education in a new shared hybrid space and where all players collectively engage in, and with, current political and policy arenas to realise the full potential of the teaching profession in building the world to which we aspire.

It is true, teacher education—as a field—has not generally articulated a response that speaks to policy makers about the effectiveness of teacher preparation programs. Reviews of teacher education research have regularly concluded that the research base relating to effectiveness of teacher preparation and its impact is characterised by isolated, often unrelated and small-scale investigations (Cochran-Smith & Villegas, 2015; Cochran-Smith et al., 2015; Murray, Nuttall, & Mitchell, 2008, p.235). In this context, the Studying the Effectiveness of Teacher Education (SETE)[1] project set out to provide a large-scale, evidence base about the effectiveness of teacher education in preparing new teachers for the diverse contexts in which they work.

Studying the Effectiveness of Teacher Education (SETE)

The Studying the Effectiveness of Teacher Education (SETE) project was a four-year longitudinal study investigating newly graduated teachers' and principals' perceptions on the effectiveness of teacher education in preparing teachers for the variety of school settings in which they began their teaching careers. It tracked 2010 and 2011 graduate teachers across two Australian states—Victoria and Queensland—to capture workforce data and gauge their perceptions of initial teacher education programs. Project partners included the Victorian Institute of Teaching (VIT), the Queensland College of Teachers (QCT) the Victorian Department of Education and Early Childhood Development (DEECD), and the Queensland Department of Education, Training and Employment (QDETE). The project was also supported by the Australian Research Council's Linkage Projects grant funding scheme.

SETE set out to investigate the following research questions:

1. How well equipped are graduates to meet the requirements of the diverse settings in which they are employed?

2. What characteristics of teacher education programs are most effective in preparing teachers to work in a variety of school settings?

3. How does the teacher education program attended impact on graduate employment destination, pathways and retention within the profession?

To address these questions, the research team employed a longitudinal, mixed methods iterative design including:

- A national mapping of teacher education programs to identify the key features of the teacher education programs offered in Australia at the time of relevance to the cohort being followed;
- Surveys of graduates including scaled questions and opportunities for open ended responses designed to ascertain perceptions about their preparedness and effectiveness (four survey rounds 2012–2014; 8,460 responses collected from 4,907 graduate teachers);
- Surveys of principals (2012-2013) including scaled questions and opportunities for open-ended responses designed to their perceptions about graduate teachers' preparedness and effectiveness (three survey rounds 2012–2013; 1,001 responses); and,
- Case studies of schools capturing graduates' early career experiences as well as their evolving perceptions of their preparedness and effectiveness (visits conducted 2011–2014; 29 case study schools and 197 new teachers).

Data collected in the survey rounds include teacher demographic information such as age, gender, country of birth, languages spoken at home, teacher education program completed, school location, and responsibilities within the school. The questions also covered reasons for selecting teaching as a career, and any prior occupations. These data provided a set of independent variables to inform inferential statistical analysis. The graduate teacher survey respondent cohort was broadly representative of beginning teachers in Australia when compared with data collected from teachers who had been

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[1] The SETE Research Team includes Diane Mayer (University of Sydney), Andrea Allard (Deakin University), Richard Bates (Deakin University), Mary Dixon (Deakin University), Brenton Doecke (Deakin University), Alex Kostogriz (Australian Catholic University), Julianne Moss (Deakin University), Leonie Rowan (Griffith University), Bernadette Walker-Gibbs (Deakin University), Simone White (Monash University) and Jodie Kline (Deakin University). See http://www.setearc.com.au/ for details of the project. See also (Mayer et al., 2015; Rowan, Mayer, Kline, Kostogriz, & Walker-Gibbs, 2015)

teaching for five years or less as reported in the Staff in Australia's Schools (SiAS) 2010 report (McKenzie, Rowley, Weldon, & Murphy, 2011).

Only about a third of employed graduates commenced their teaching careers in permanent positions while 11 per cent worked on a casual basis and almost 60 per cent commenced teaching in a contract position. There was some improvement towards more stable employment over the duration of the study with almost 55 per cent in permanent employment in the last survey round in 2014. Graduates of bachelor degrees were more frequently working as teachers and males were more likely to secure full-time employment.

In each survey round, approximately 75 per cent of graduate teachers said they would recommend their teacher education program to others. Those with a teaching position felt more positive about their teacher education than those without a teaching position and were more likely to recommend their program. This was evident especially in the cases of the graduate teachers with full-time permanent positions and who had regular and intensive classroom experiences for the previous six months.

Despite the 'knowledge ventriloquism' and 'echo chambers' (Zeichner & Conklin, 2017) involved in manufacturing the current narrative of failure of teacher education, SETE findings show that overall the graduate teachers felt prepared by their teacher education program and effective as beginning teachers across nine key areas:

- Teaching culturally, linguistically and socio-economically diverse learners
- Design and implementation of the curriculum
- Pedagogy
- Assessment and the provision of feedback and reporting on student learning
- Classroom management
- Collegiality
- Professional engagement with parents/carers and the community
- Professional ethics
- Engagement with ongoing professional learning

Overall, respondents had higher levels of agreement that they were effective in the key areas of teaching than they had with being prepared in these areas. Principals' ratings of effectiveness were similar but generally higher than the graduate teachers' self-rating, across all areas.

However, there were areas in which the graduate teachers felt more prepared and others in which they felt less prepared. They reported being:

- better prepared by their teacher education program in *Pedagogy*, *Professional ethics*, and *Engagement with ongoing professional learning*;
- less well prepared in *Classroom management*, *Professional engagement with parents/carers and the community*, *Assessment and the provision of feedback and reporting on student learning*, and *Teaching culturally, linguistically and socio-economically diverse learners*;
- more effective as beginning teachers in *Professional ethics* and *Engagement with ongoing professional learning*; and
- less effective in *Teaching culturally, linguistically and socio-economically diverse learners*, *Design and implementation of the curriculum*, *Pedagogy*, and *Assessment and the provision of feedback and reporting on student learning*.

In SETE, the graduate teachers displayed an understanding of the importance of initial teacher education in providing them with the necessary knowledge and skills to enter the profession as effective beginning teachers, but they also acknowledged that their professional learning and growth continued during their first years of teaching. However, as noted, their perceptions about how well their teacher education program had prepared them for beginning teaching were mediated by a range of issues. Not unlike Brouwer and Korthagen (2005), SETE found that the type of employment (for example, contract or permanent) and the school context including various levels of formal and informal support for the graduate teachers, had a large impact on how graduates perceived their teacher education program.

Teacher education in a third hybrid space: Beyond partnerships

The SETE findings inform questions of teacher preparedness and effectiveness within a wider discussion around being and becoming a teacher (Britzman, 2003). Initial teacher education is viewed as the first part of a professional continuum of doing and learning and growing expertise, rather than a distinct preparatory phase

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(Ward, Grudnoff, Brooker, & Simpson, 2013). SETE highlights learning teaching as:

- not linear nor staged-based

- mediated by the local context (universities and schools) as well as the broader political context and by local conditions of work

- building on pre-existing knowledge and developing as a result of accessing a knowledge base for teaching and practice-based inquiry

SETE concludes that to understand how teachers are prepared for the variety of school and community settings in which they ultimately teach, teacher education must focus on a transitional space, a hybrid and third space, one where learning teaching and/or doing teaching is not situated at one point in time with one side of the 'partnership' (in university), and then at another point in another partnership space (in school), and then somewhere in between after graduation and during early employment where the graduates themselves are left to make sense of and negotiate the context and their learning, often with little support.

The idea of teacher education as a continuum of teacher learning has been evident in policy and some practice for some time (Conway, Murphy, Rath, & Hall, 2009) and, in 2009, Green argued for thinking about teacher education across a continuum of preparatory, transitional, and continuing teacher education, involving both universities and the profession (Green, 2009). However, a lack of connection between teacher education in universities and teacher education and teaching practice in schools is highlighted by the SETE project, and is popularised as a theory–practice divide and a disconnect between learning teaching and doing teaching. These play out as dichotomies in the data and also in policy, for example: being prepared then being effective; learning teaching in a preservice environment and then in-service; learning teaching in universities versus in schools; learning teaching then doing teaching; theory versus practice; and, university knowledge versus school knowledge.

While supporting an initial-transitional-continuing view of teacher education as a journey from novice to expert, SETE findings highlight the importance of focussing on graduate teachers' lived sense of preparedness and effectiveness *in*

the transitional space, a space in which the boundaries between 'being prepared' and 'being effective' are blurred. In this space, learning teaching and doing teaching are mediated by the local context (universities and schools) as well as the broader political context and by local conditions of work. While Zeichner, Payne, and Brayko (2015) called for approaches to teacher preparation that value and promote interaction between practitioner, academic, and community-based knowledge requiring the creation of new 'hybrid spaces' where these knowledges can come together, SETE argues for more and newer synergies in creating new a collaborative hybrid space for teacher education (physical as well as conceptual) involving universities, employers and schools that bring together learning teaching and doing teaching. This 'beyond partnerships' approach will be critical to effective teacher education and central to professionalising teacher education accountability by redefining what is most relevant when asking questions about the effectiveness of teacher education. Further, SETE points to the importance of educators and education researchers becoming more successful in collectively engaging in, and with, current political and policy arenas to realise the full potential of the teaching profession in building the world to which we aspire.

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Teaching Human Rights

MS MEGAN MITCHELL
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Biography

Megan Mitchell commenced her term as the first National Children's Commissioner in March 2013. Her role focuses on the rights and interests of children, and the laws, policies and programs that affect them. Megan has extensive experience in issues facing children and young people, with practical expertise in education, child protection, foster and kinship care, juvenile justice, children's services, child care, disabilities, and early intervention and prevention services. Megan's previous roles include NSW Commissioner for Children and Young People, Executive Director of the ACT Office for Children, Youth and Family Support, Executive Director for Out-of-Home Care in the NSW Department of Community Services and CEO of the Australian Council of Social Service.

Abstract

In a rapidly changing and globalising world, a key challenge for educators is empowering students to become active and informed global citizens. Megan will explore how Australian educators are at the forefront of creating a just and equitable society. Addressing the complex social, political and moral dilemmas that confront our society can be challenging in the classroom context. However, human rights education provides a platform for educators to meaningfully engage with children and young people about these local and global issues. Human rights education means teaching about human rights, using human rights pedagogies, for achieving human rights outcomes. Megan will speak about methods for engaging students of all ages with human rights ideas and principles by examining education resources developed by the Australian Human Rights Commission.

The right to education

There are a number of international human rights instruments that place legal obligations on the Australian Government. These instruments include: the International Covenant on Civil and Political Rights; the International Covenant on Economic, Social and Cultural Rights; the Convention on the Rights of the Child; the Convention on the Elimination of All Forms of Discrimination Against Women; the Convention on the Rights of Persons with Disabilities; the Convention on the Elimination of All Forms of Racial Discrimination; and of course, the Universal Declaration of Human Rights. Common among many of these frameworks, is the recognition of the right to education.

The right to education was first recognised as a fundamental human right by the international community in 1948 in the Universal Declaration of Human Rights (UDHR), the foundational document for human rights.

The UDHR states that everyone has the right to education and also that:

Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups (Article 26(2)).[1]

This sums up the powerful role that education plays in creating the kind of societies we want to see in our world. Education assists individuals to fully realise their potential and to meaningfully engage in civic and economic life; it can provide a platform to surmount entrenched socio-economic disadvantage and discrimination; and it equips individuals with the tools to stand up for their rights and the rights of others. Dedicated and proactive teachers are vital to ensuring that children and young people in Australia, and around the world, receive all the benefits that education has to offer.

The right to education has been further elaborated in international human rights treaties that have followed the UDHR including the International

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[1] *Universal Declaration of Human Rights,* GA Res 217A (III), UN GAOR, 3rd sess, 183rd plen mtg, UN Doc A/810 (10 December 1948).

Covenant on Economic, Social and Cultural Rights and the Convention on the Rights of the Child. These treaties strongly articulate the aspirations we hold for education to create the world we wish to see.

Of course, in reality the distance between international agreements on human rights and the substantive realisation of those rights can be vast. While the right to education is widely recognised and formally available in Australia, the uneven manner in which education is provided, and the disadvantages that some students experience outside the school system, mean that unfortunately there continues to be children who fall through the cracks in our system and whose human rights are not substantially realised. Many Australians are already well aware of this inequity.

These concerns have also been raised by the international community. In their last review of Australia in 2012, the United Nations Committee on the Rights of the Child raised concerns about access to education for Aboriginal and Torres Strait Islander children, children living in remote areas, children with disability, children in care and children from non-English speaking backgrounds, noting that these groups have consistently been vulnerable to non-enrolment, low attendance and had poorer learning outcomes.[2] While the Committee recognised that there had been some progress made, including the development of new plans and frameworks that focus on education outcomes for Aboriginal and Torres Strait Islander children and the creation of my role, the office of the National Children's Commissioner, it also noted that Australia still has some real work to do if we wish to achieve equity in educational opportunities and outcomes.

The Australian Government has made a commitment to improving the educational outcomes of all children in Australia through its participation in the development of, and commitment to, the United Nations Sustainable Development Goals (SDGs). The SDGs build on the progress made by the Millennium Development Goals (2000-2015) in reducing global poverty by establishing '17 goals to transform our world.' Sustainable Development Goal 4 relates to education. Its specific targets include: 'ensur[ing] that all girls and boys complete

free, equitable and quality primary and secondary education' and:

> *Ensur[ing] that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.* [3]

The SDGs explicitly establish education about human rights and good global citizenship as key priorities for the international community over the next 15 years.

The right to human rights education

The SDGs are of course not the first international initiative to highlight the importance of human rights education; as mentioned earlier the UDHR referred to this as early as 1948. However, over the last few decades, there has been increasing recognition of the importance of building human rights learning into the formal education system. Schooling, at least in many countries, has moved well beyond the traditional 'chalk and talk model'; it is now understood that the education system must act as a primer for life when children inevitably venture beyond the classroom walls.[4] Though this was espoused in the UDHR, it was not necessarily generally accepted by society more broadly. Today however, teachers, families, schools, government, civil society and students themselves understand that the education system plays an important role in preparing students to be informed, engaged and active citizens.

While education itself is a basic human right and equitable access is vital to the creation of a just society, education specifically related to human rights and responsibilities is also critical. Human rights education is crucial to ensuring that people are aware of, and able to exercise, their rights, as well as their responsibilities to respect and protect the rights of others.

The single most important document for my role as National Children's Commissioner is the Convention on the Rights of the Child (CRC). The

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[2] United Nations Committee on the Rights of the Child, Concluding Observations: Australia, UN CRC, 60th sess, Un Doc CRC/C/AUS/CO/4 (2012).

[3] United Nations Sustainable Development Goals, Goal 4 at http://www.un.org/sustainabledevelopment/education/ (viewed 4 August 2016).
[4] See for example: Henry A. Giroux, *Teachers as intellectuals: towards a critical pedagogy of learning* (Bergin & Garvey Publishers, Inc., 1988); Stanley Aronowitz, 'Paulo Freire's radical democratic humanism' in Peter McLaren and Peter Leonard. (eds.), *Paulo Freire: A critical encounter* (Routledge, 1993).

CRC reminds us that in addition to possessing all of the rights set out in other international instruments, children and young people have additional rights and special protection due to their particular vulnerability to exploitation and abuse. The CRC expressly acknowledges 'the right of the child to education' (Article 28(1)) detailing that education shall be directed to:

(a)   The development of the child's personality, talents and mental and physical abilities to their fullest potential;

(b)   The development of respect for human rights and fundamental freedoms, and for the principles enshrined in the Charter of the United Nations;

(c)   The development of respect for the child's parents, his or her own cultural identity, language and values, for the national values of the country in which the child is living, the country from which he or she may originate, and for civilizations different from his or her own;

(d)   The preparation of the child for responsible life in a free society, in the spirit of understanding, peace, tolerance, equality of sexes, and friendship among all peoples, ethnic, national and religious groups and persons of indigenous origin;

(e)   The development of respect for the natural environment. (Article 29). [5]

The CRC specifically references human rights learning, including for the development of respect, tolerance and understanding, as a right for all children.

The movement in support of human rights education is very much a global one. In 2005, the United Nations established the World Programme for Human Rights Education under the Office of the High Commissioner for Human Rights. Their hope is that:

> By promoting respect for human dignity and equality and participation in democratic decision-making, human rights education contributes to long-term prevention of abuses and violent conflicts. By educating

> children about human rights from a young age, we can create a better, more peaceful, world in the future.[6]

In 2011, the UN took this idea a step further by adopting the *Declaration on Human Rights Education and Training*. This landmark statement affirms the right of all people to have access to human rights education.

At the domestic level, National Human Rights Institutions like the Australian Human Rights Commission are strong advocates for, and leaders in, human rights education. The Commission believes that developing a moral and ethical understanding of the world, and an appreciation for the rich diversity of people within Australia is an integral part of young people becoming active and informed citizens.

However, it is not just the Commission advocating for educating ethical, engaged and informed Australian citizens. The 2008 Melbourne Declaration on Education Goals for Young Australians, developed by Education Ministers from across the country, identified students becoming 'active and informed' citizens as a critical objective of the Australian education system.[7] Human rights education was also identified as a key priority in Australia's Human Rights Framework (2008) and again in the National Human Rights Action Plan (2012) which outlines a variety of measures aimed at promoting protection of, and respect for, human rights.

Despite all these international and national aspirations and commitments, there remains much room for improvement. The United Nations Committee on the Rights of the Child, which I mentioned earlier, made a number of recommendations in 2012. They recommended the addition of 'public education on child rights as a core objective of its [then] proposed National Human Rights Plan' and the inclusion of 'mandatory modules on human rights and the Convention in [the] school curriculum and in training programmes for all professionals working with or for our children.'[8] Although Australia has certainly made some progress in incorporating

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[5] *Convention on the Rights of the Child*, GA Res 44/25, UN GAOR, 61st plen mtg, UN Doc A/RES/44/25 (20 November 1989, adopted 2 September 1990).

[6] United Nations, OHCHR and UNESCO, *Plan of Action: World Programme for Human Rights Education*, ED-2006/WS/53 (2006).
[7] Ministerial Council on Education, Employment, Training and Youth Affairs, Melbourne Declaration on Educational Goals for Young Australians (December 2008) at http://www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf (viewed 4 August 2016).
[8] United Nations Committee on the Rights of the Child, *Concluding Observations: Australia*, UN CRC, 60th sess, Un Doc CRC/C/AUS/CO/4 (2012).

human rights and child rights learning into the education system, we could be doing much more.

Realising human rights through human rights education

Now that we've established that the international community and Australia are in agreement that there are rights to both education and human rights education, perhaps it would be useful for me to elaborate what I mean by human rights education. The commonly accepted definition of human rights education is that it includes teaching about human rights content, and involves incorporating human rights through teaching and learning practices that exemplify and model behaviours reflective of human rights principles, such as equality, fairness, non-discrimination and respect. Perhaps most importantly, human rights education is also about teaching *for* the realisation of human rights, or in other words, using pedagogical approaches that empower students to stand up for their own rights and for the rights of others. Inherent in teaching human rights education is using a human rights based approach.

The principle of participation is central to a rights-based approach. Everyone has the right to participate in decisions which affect their human rights. Participation must be active, free and meaningful, and give attention to issues of accessibility, including access to information in a form and a language which can be understood. This concept is also one of the guiding principles of the Convention on the Rights of the Child. Article 12 gives to every child, including very young children, the right to be taken seriously and be heard in matters affecting them. These views should be given weight in accordance with the child's age and maturity. As the recent Royal Commission into Institutional Responses to Child Sexual Abuse has so clearly demonstrated, silencing children does not protect them.

In the school context, as children are key stakeholders in the education system, their views and opinions are crucial to the development and design of their own learning. Hearing from children is not only empowering for them, it helps adults to get things right. Every day, policies, programs and laws are being developed that impact directly or indirectly on children and young people. As the experts in their own lives, ignoring their experiences and perspectives will invariably lead adults to intervene in ways that just don't work.

A good example is the national consultations that the Australian Curriculum, Assessment and Reporting Authority (ACARA) conducted around the development of the Australian Curriculum. Throughout the curriculum development stages, ACARA consulted openly and widely and encouraged children and young people to make submissions and participate in consultations, and for this they should be congratulated. However, the engagement of children and young people remained limited and we have to ask if the processes themselves were really as accessible as they could have been to all children. Did we go far enough to genuinely support the full participation of children and young people in this area that they have a critical stake in?

There is undoubtedly an opportunity for improving the extent to which children and young people are consulted and involved in decisions relating to their own education. I like to think that the education system has shifted away from the idea of teaching as 'the sage on the stage', towards a more participatory approach of 'the guide on the side'. This means supporting learners to articulate and advocate for themselves, including by ensuring that they are aware of their specific rights under the Convention on the Rights of the Child, and in particular, the right to have a say in decisions that affect them. In 2013, I conducted a national listening tour which I called 'The Big Banter'. Through interviews and postcards, thousands of Australian children and young people told me what was most important to them. Many of them expressed a desire to be heard and more engaged in decisions affecting them and their communities. They also said that they wanted all children to be aware of their rights. A 15 -year-old from Victoria said:

> *I have a little sister who is 9 years old. We both know that kids and young people should be safe and be able to go to school and have food, but we'd never heard of the UN Convention that puts all of this in writing. In fact, I don't think many young people know about the Convention. But we should know because it's important to see this in writing and for me, it was comforting to see that I and other young people are recognised this way.[9]*

A desire for greater equality within Australian society was also a common theme. Unsurprisingly, non-discrimination and equality are also crucial

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[9] Australian Human Rights Commission, *Children's Rights Report 2013* (2013) 92.

elements of a human rights based approach. This approach demands that all forms of discrimination in the realisation of rights must be prohibited, prevented and eliminated. It also recognises that priority should be given to people in the most marginalised or vulnerable situations who face the biggest barriers to realising their rights. All Australian children, regardless of location, circumstances, background or ability, should have equal access to high-quality, free education. In the words of one Australia teenager, 'Education is knowledge and knowledge is power. And all children should have the chance to use their power to better our country'.[10]

Challenges to human rights education in Australia

There are of course, specific barriers within the Australian education system when it comes to implementing human rights education. For several years now, the Australian Human Rights Commission has been developing free resources on a variety of human rights issues. Last year, the Commission conducted an evaluation of all our current *RightsED* resources. Through interviews, focus groups and surveys, over 1,000 educators were consulted about their views on the Commission's school resources. Almost all respondents (98 per cent) considered it important to educate students about human rights, with over half (56 per cent) indicating that they thought it was extremely important.

However, the evaluation also highlighted how teaching human rights can be a daunting undertaking for many teachers. There are significant barriers to incorporating human rights education into the classroom. In the survey, respondents identified the main barrier as the crowded curriculum. 58 per cent of respondents said they didn't have enough time to cover human rights education in their classes. Another 27 per cent of respondents said that they didn't teach about human rights because it wasn't a mandatory requirement or a cross-curriculum priority. On top of this, human rights subject matter is often very complex and sometimes controversial.

Teachers also related some concerns regarding human rights education. One of the most common was a concern about negative parent or carer reactions to the incorporation of human rights learning into the classroom (21 per cent) and the lack of knowledge and understanding of how to integrate human rights into their teaching (17 per cent).

So, in light of this challenging context, how do we begin to incorporate human rights into the classroom?

Supporting teachers

There has been some recent progress in linking human rights to the curriculum. During the development of the new national curriculum, the Commission worked with ACARA to ensure that human rights content and principles were interwoven throughout. Through ACARA's consultation process we provided extensive advice, particularly in relation to the development of the General Capabilities:

- Ethical understanding
- Intercultural understanding
- Personal and social capability

We also made contributions on how to strengthen human rights education in the subjects of Geography, Health and PE, History, Civics and Citizenship and Business.

Many of our suggestions were then incorporated into curriculum content. As a result, human rights can be explicitly found in:

- Geography, where students are asked to consider the liveability of spaces for people from diverse cultures or people with disability
- History, where students are required to consider the significance of the Bringing Them Home report or the Sex Discrimination Act
- HPE, where students are asked to examine and challenge stereotypes about race, violence, sexuality and ability.

However, the Australian Human Rights Commission believes that human rights can be taught in any subject area. For example, in:

- Mathematics, by teaching students about statistics using data on the disparity of outcomes across different communities
- Science, by teaching about the commercial use of Indigenous knowledge biodiversity.

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[10] Australian Human Rights Commission, *Children's Rights Report 2013* (2013) 79.

Supporting human rights education

To support teachers in doing this, the Australian Human Rights Commission has developed a range of human rights education resources for students of all ages, across a range of learning areas. These resource are designed to assist students gain a critical understanding of their human rights and responsibilities, and to develop the attitudes, behaviours and skills to apply human rights within their day to day lives and in their communities. These resources are easily accessible and free to download via the Commission's website at http://humanrights.gov.au/education

Our resources are designed with the crowded curriculum and the existing constraints on teacher's time, in mind. Each resource is mapped to the Australian curriculum and includes lesson plans and suggestions for interactive activities for teachers to use with their students. Resources have been designed for a variety of subjects at the primary (especially Years 5 and 6) and secondary (especially Years 7-10) levels. Many of the resources are mapped to the Civics & Citizenship, History and Health and Physical Education curriculum, but we have also developed resources for Geography, Mathematics, Economics, Legal Studies, English, Arts/Drama and others. I am also very excited to let you know that we have just developed our very first RightsEd resource, 'Building Belonging' for early childhood education, which will be released very soon. This builds on our growing work in the early childhood sector following the development, with Early Childhood Australia, of 'Supporting young children's rights: Statement of intent (2015-2018)'.

One of our newest RightsED resources – 'Introduction to Human Rights and Responsibilities' is mapped to the Humanities and Social Sciences curriculum for Years 5 and 6. It has been designed to be used with an interactive whiteboard but can also be used on any internet enabled device, including a computer or tablet hooked up to a data projector. This resource includes two interactive lessons with accompanying teacher resources (including lesson plans) and suggested homework activities.

In order for human rights to resonate with young people (or anyone actually!) they must be relevant to their personal experiences. Recognising this, we try to use appropriate current examples and case studies, and incorporate practical interactive activities in our resources. For example, in this particular resource, students work together to create a classroom charter of rights and responsibilities. They are then asked to apply the knowledge and principles at home by discussing what they have learned with their families and developing a family charter. In this way, students also become potential change-makers, introducing human rights education to their families!

The Commission is currently working on developing a new suite of resources for Years 7-10. With the overarching theme 'The Story of our Rights and Freedoms,' these resources will explore Australian democracy, the Constitution, the 1967 Referendum and women's suffrage. Consultation with students and teachers will be a key part of the design and development process.

Conclusion: Teachers as change makers

Developing a moral and ethical understanding of the world, and an appreciation for the rich diversity of people within Australia is an integral part of young people becoming active and informed citizens. Teachers can facilitate this by encouraging students to think critically about social issues and by promoting learning about enduring ethical, moral and legal issues. Teachers can create engaging and substantive learning experiences that challenge stereotypes, accepted 'truths', and the ways in which we do things that perpetuate inequalities that are entrenched within our society.

To ensure that human rights education is fully, rather than just formally, available to all students, we need courageous educators who will champion supportive and inclusive learning environments. Learning about fundamental rights and freedoms, such as those contained in the Convention on the Rights of the Child and the Universal Declaration of Human Rights, can equip students with the knowledge and skills to bring about positive change in their lives and communities. Teachers, as change-makers, have the power to introduce new ideas and educative methods that reach out to all students. Teachers can build greater cohesion–in the classroom and beyond–by encouraging ethical and intercultural understanding, and developing personal and social capabilities. Teachers can initiate changes to school facilities and activities that enable and engage students of all backgrounds. And teachers can call on governments to collaborate and ensure that every

child, regardless of their background, has their right to education fulfilled.

Being a true leader, in the education sense, means going beyond typical expectations to improve student learning in a real and practical way. By creating inclusive learning environments that redress social inequalities, and by empowering students to become active and ethically aware citizens, Australian teachers and educators are at the forefront of building a just and cohesive society. Human rights education frameworks and programming can provide a platform for assisting teachers to 'build the world to which we all can aspire.' And by transforming classrooms, you can change lives and change the world!

A model for a new financing framework for tertiary education in Australia

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Biography

Peter Noonan is an Honorary Senior Fellow in the Melbourne Graduate School of Education in the LH Martin Institute for Tertiary Education Leadership. Since 2104 he has undertaken highly influential work and is a frequent media commentator on the financing of higher education and VET and tertiary education generally. Peter has played a major role in shaping policy in VET, Higher and Post Compulsory Education in Australia for over 25 years as a researcher, senior public servant, consultant, and adviser to national and state governments. He was a member of the 2008 Expert Panel for the Review of Australian Higher Education (Bradley Review) and is a former adviser to the national Higher Education Minister for Higher Education. In 2010 he undertook a review of Post Secondary Education and Training for the Queensland State Government. Peter was awarded the Houghton prize in education in 1980. He was also the recipient of a Fullbright Award to the US in 1994.

Thank you to the organisers of the Conference and to the College for the invitation to speak to you today.

The College has made for many years and continues to make a critical contribution to the advancement of all sectors of education in Australia and the Mitchell Institute welcomes the opportunity to present some of our most recent work on the funding of tertiary education in Australia.

The Mitchell Institute was established in 2013 by Victoria University, Melbourne, with foundational investment from the Harold Mitchell Foundation.

The Mitchell works to improve the connection between evidence and policy reform. We actively promote the principle that education is fundamental to individual wellbeing and to a prosperous and successful society.

My paper today is an edited version of a major paper we are releasing today on a new system for financing tertiary education in Australia. The longer paper and supporting data is now on the Institute website http://www.mitchellinstitute.org.au/.

I start with the proposition that a high quality and inclusive tertiary education[1] system is essential for Australia's continuing and accelerating transition to a leading, knowledge intensive economy.

Tertiary education provides the deep knowledge and the specialised skills critical to Australia's future as a cohesive, productive, healthy and globally engaged society. Tertiary education provides much of the new knowledge and many of the enabling capabilities required to address the major social and environmental challenges facing Australia, and to harness the transformative power of new technologies.

Over the five years to November 2015, the majority of Australia's employment growth was in occupations that require post-school qualifications gained through either the university or the vocational education and training (VET) sectors[2]. This is no longer a trend – it is an established labour market reality.

The Department of Employment projects that of the almost 1 million jobs expected to be created in

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[1] Tertiary Education is defined as Certificate II and above.
[2] Department of Employment. (2016). Australian jobs 2016. Australian Government, Canberra. Available from: https://docs.employment.gov.au/system/files/doc/other/australianjobs2016_0.pdf

Australia from 2015-2020, 920,000 will require a tertiary education. Only 69,000 jobs – just 3.4 per cent of the total – will be available for people who do not progress beyond Year 12 or equivalent.

There are broader economic and productivity factors to consider as well.

Australia must increase its workforce participation rate. The Australian population is aging but it is also growing both through births and net migration. This means that dependency ratios – the proportion of the people in the workforce relative to people not in the workforce – will increase as a consequence of people leaving the workforce and growth in the number of children and young people not yet in the workforce[3].

People with a tertiary education are more likely to participate in the workforce for longer, and in more rewarding jobs, than those without a tertiary education. They are also more likely to be able to adapt to changing labour market circumstances. These benefits of tertiary education increase as levels of educational attainment increase, highlighting the important role of tertiary education in career progression and mobility within the workforce.

In 1982, Australian governments, through their Education ministers and portfolios, decided to significantly improve school retention rates.

In a decade, retention rates from Year 7 to Year 12 more than doubled, rising from 36 per cent in 1982 to over 77 per cent in 1992[4] . Although subsequent measures to achieve near universal school completion have been less successful, we must acknowledge the remarkable progress, underpinned by substantial government and community investment.

But we stand to lose the benefits of the substantial additional investment in Australian schooling if we assume that Year 12 is the end game. It isn't. We need to continue improving participation and outcomes from schooling and capitalise on those improvements by translating them into wider participation in, and solid outcomes from, tertiary education.

From 2005 to 2015 the proportion of the workforce holding a bachelor degree or higher qualification rose from 23 per cent in 2005 to 31 per cent, while VET qualifications rose from 26 per cent to 32 per cent. In the same ten-year period to 2015, the proportion of the workforce without post-school qualifications fell from 42 per cent to 32 per cent[5].

This momentum must be maintained, not just to fill future job vacancies and to meet future workforce skills needs, but to ensure that younger and older Australians are well-placed to effectively participate in a rapidly evolving labour market and to effectively participate in an increasingly well-educated society.

Moving to universal participation in tertiary education is an acute challenge for Australia. It must be achieved in the context of a tightening fiscal outlook for all Australian governments and competing pressures from other areas of service delivery. The challenge is amplified by slow wages growth which limits the capacity of individuals and families to invest in education.

However, it is a challenge Australia must understand, confront and meet.

Modelling undertaken in the paper we are releasing today indicates that[6] :

- If enrolments remain at current levels[7] participation by 15-24 year olds in tertiary education will fall from 39 per cent in 2012 to 32.9 per cent in 2030. If that was borne out, the participation rate in 2030 would be lower than in 2008.
- Without the participation increases since 2008, 175,000 fewer young Australians would be participating in tertiary education today;
- 200,000 additional enrolments in tertiary education by 2030 will be required just to or to barely maintain current participation levels;
- Over 500,000 additional enrolments would be required if participation levels were to increase by 2 per cent per annum from

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[3] Australian Institute of Health and Welfare (2015). Australia's Welfare 2015. AIHW, Canberra. Available from: http://www.aihw.gov.au/australias-welfare/2015/working-age/
[4] S Lamb et al, ibid, p. 3.

[5] Department of Employment, ibid, p. 30.
[6] Data will be presented at the conference
[7] It is recognised that combining VET and higher education enrolments has limitations as many VET students are enrolled in relatively short courses, may participate in more than one course in a year, and may be enrolled in both sectors during the year.

now to 2030, with participation rates rising from 38 per cent to 48 per cent[8] over that period.

There are diverging trends in funding and enrolments between the higher education and VET sectors with funding for and enrolments in VET in decline since 2012.

I was a member of the Expert Panel for the Review of Australian Higher Education (Bradley Review) in 2008 and it is important in recommending the introduction of demand driven funding in higher education, and foresaw the risks associated if demand driven funding was introduced to the higher education sector alone. The Review argued that:

> … *moving to a demand-based approach to funding higher education cannot be done in isolation from VET. Changing higher education funding but leaving VET funding untouched would compound existing distortions[9].*

Indeed, the Review warned that:

> *It appears too, that some states and territories faced major fiscal constraints, which may lead them to reduce their investment in VET in the near future, leading to skewed and uneven investment between sectors over time if a demand base funding model is adopted for higher education[10].*

Due to the downturn in investment in VET and the overall downturn in VET enrolments since 2012, demand funded higher education is now the only source of funded growth for tertiary education in Australia.

As a consequence, there is continuing and increasing debate about the future of the demand driven higher education system (in terms of cost and entry requirements) and about higher education outcomes (in terms of attrition rates and graduate employment).

However, calls to recap higher education enrolments are ill informed and contrary to the long term national interest. Such calls fail to account for population trends and the constraining

effects recapping would have on participation rates. Challenging the recapping proposition must not be taken as an argument for the current higher education demand based funding system to continue in perpetuity.

Rather it is making the case that decisions be taken with longer term policy goals clearly in the frame, and that the scope of such decisions must include complementary decisions on VET sector funding.

There are a range of unresolved issues from previous reviews and reform proposals in higher education, including:

- the future of the demand driven system;
- course funding levels and how courses are priced;
- the potential for fee flexibility for 'Flagship courses';
- HELP system settings, including the income level at which repayments should commence and repayment rates;
- potential extension of the demand driven system to higher education sub-degree programs;
- availability of demand driven funding for post-graduate programs; and
- opening up public funding to non-university private higher education providers.

These issues are the subject of an ongoing consultation process, principally through submissions to a Commonwealth Government Discussion Paper[11]. The Commonwealth government is also in the process of finalising arrangements for higher education entry standards and protocols for university admissions in terms of publishing ATAR requirements for courses.

Separately, the Commonwealth has undertaken a consultation process, also underpinned by a discussion paper[12], on future VET FEE-HELP arrangements. The policy objective of this work is to redress widespread misuse of the scheme, notably fee overpricing.

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[8] The modelling undertaken for an increased participation rate also includes a scenario where VET enrolments increase more than higher education enrolments. However, this scenario affects the distribution of enrolments but not total enrolments.

[9] D Bradley, P Noonan, H Nugent, and B Scales. (2016). Transforming Australia's Higher Education System (Final Report of the Review of Australian Higher Education), p. 185. Australian Government, Canberra.

[10] D Bradley et al, ibid, p. 183.

[11] Department of Education and Training. (2016.) Driving Innovation, Fairness and Excellence in Australian Higher Education. Australian Government, Canberra. Available from: https://docs.education.gov.au/system/files/doc/other/he_reform_paper_driving_innovation_fairness_and_excellence_3_may_2016.pdf

[12] Department of Education and Training. (2016.) Redesigning VET FEE-HELP: Discussion Paper. Australian Government, Canberra. Available from: https://docs.education.gov.au/system/files/doc/other/redesigning_vet_fee-help_-_discussion_paper_0_0.pdf

In 2015, the Commonwealth also initiated through the Council of Australian Governments (COAG) a review of its broader partnership agreements with states and territories for funding the VET sector, including options to realign Commonwealth and state/territory VET funding responsibilities. The Commonwealth floated the option of assuming from the states full responsibility for VET funding. It has not pursued this proposal following strong opposition from some states.

The future outlook for VET funding is poor – even Commonwealth funding for VET will fall by $450 million in 2017 when the current National Partnership Agreements for Skills Reform ceases. Based on recent trends, continuing reductions in funding are likely in most states and territories.

However, the problems related to declining enrolments in the VET sector cannot be attributed purely to funding.

A range of factors have collectively dampened demand for VET, particularly for students who can readily access a university place. The factors include:

- reputational damage to the sector resulting from widespread adverse publicity as a consequence of VET FEE-HELP abuses;
- fee increases in certificate courses for students who cannot access income contingent loans; inappropriate provider behaviour in some states as a consequence of poorly designed training markets;
- negative publicity associated with the loss of market share by TAFE and cuts to TAFE;
- declines in apprenticeship and traineeship enrolments; and
- deteriorating employment outcomes.

These problems are overlaid with other impediments to VET participation – notably social and parental attitudes, the role and structure of senior secondary certificates, and dominant values in schools which value higher education over VET.

Issues under current consideration by the Commonwealth, while critical, are largely concerned with how tertiary (particularly higher) education is financed. There is yet no apparent focus on the broader purposes of financing tertiary education, nor on the respective roles and contributions of the VET and higher education sectors.

There is also growing concern about the costs of the various HELP schemes.

These costs are not sufficiently recognised or transparent on an annual basis as the costs (debt not repaid and the costs of interest subsidies) form part of the Government's overall net debt.

The annual costs of HELP debt needs to be undertaken on a more regular and transparent basis to inform future policy decisions on HELP that seek to set an appropriate balance between subsidies and HELP contributions.

Consideration also needs to be given to mechanisms to ensure that providers share in the costs of interest subsidies and doubtful debt in the HELP scheme, particularly where fees exceed course price benchmarks and private returns to students are not sufficient to meet the long term costs of HELP.

Decisions on future arrangements for higher education and VET funding in Australia will follow several years of policy success in some areas and policy stasis and failure in others.

The mixed outcome is reflected in recent changes which have, in the main, achieved their policy objectives (such as demand driven higher education funding) and resulted in significant policy failures (such as VET FEE-HELP). Decisions on future arrangements can build on the foundations of relatively mature systems that have adapted and evolved over several decades, but most also recognise that some elements of those systems are now dated.

To paraphrase Tom Holland's description of the Roman Republic, tertiary education funding in Australia is currently both a 'building site and a junk yard'. Although Holland also points to the virtues of the Romans in governing their society:

> … *preserving what worked, adapting what had failed and preserving as ancient lumber what had become redundant*[13] .

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[13] Holland T. (2011). *Rubicon: The Triumph and Tragedy of the Roman Republic*, Hachette, UK, p. 70.

In a similar vein the former Secretary of the Department of Foreign Affairs and Trade, Peter Varghese, has urged an approach to policy formation of 'radical incrementalism', arguing that:

> *Small steps only work as a strategy however if the ultimate objective is clear and genuinely transformational. This is the essence of radical incrementalism. And it is not to be confused with its evil twin, ad hoc incrementalism, which are small steps taken in the absence of a broader change agenda. The latter is taking up too much space in our political and bureaucratic cultures[14] .*

There is a real risk in Australia at present of ad hoc incrementalism in relation to pending decisions on tertiary education funding in Australia and that it will continue to look more like a junk yard than a new building!

Drawing on previous work undertaken by the Mitchell Institute the four main elements of a more coherent tertiary financing system in Australia – building on but adapting what currently exists – could comprise:

1) A Commonwealth funded higher education subsidy system spanning higher education diplomas, advanced diplomas, associate degrees, degrees and post-graduate qualifications, based on higher education course resources benchmarks:

   a) VET diplomas and advanced diplomas could also be included in this system so that all qualifications at AQF level 5 and above are funded by a single level of government;

2) A jointly funded system of national VET qualifications through bilateral investment plans between the Commonwealth and the states/territories, but with the states/territories retaining responsibility for VET provider funding and oversight in each jurisdiction:

   a) In each jurisdiction funding would be based on an agreed set of qualifications and agreed pricing;

3) HECS-HELP for all subsidised courses with student contributions based on maximum fee levels, or flexible fees based on pricing guidelines and oversight:

   a) The states/territories would continue to contribute to the costs of administration, interest subsidies and debt not repaid for state subsidised courses.

   b) The Commonwealth could consider mechanisms to ensure that higher education providers also contributed to these costs where course fees exceed the higher education course resources benchmark.

4) FEE-HELP for full fee higher education courses and a limited number of VET courses in areas of clear long term private benefit, combined with mechanisms that ensure providers contribute to the costs of FEE HELP.

A tertiary education finance system must be effectively governed. Some governance functions relate to the tertiary sector as whole and should be undertaken by an overarching body, others are sector specific and should be developed and administered by specialist bodies for each sector.

There is a strong case for an independent authority to govern the tertiary funding system. Independent status means the authority would operate at arm's length from government. It would have a clear charter to oversee and administer the Commonwealth's investment in tertiary education to achieve policy objectives established by the Government, in the case of VET by agreement with the states and territories.

The Commonwealth Government now seeks research and advice from Infrastructure Australia before finalising decisions on investment in physical capital. Incorporating an independent perspective into its deliberative decision making process ensures that Government decisions are based on thorough assessments of long term needs and cost/benefit analysis.

Recommendations on competitive research funding are taken through the Australian Research Council (ARC) and the government's own direct investment in scientific research and development is independently determined though the CSIRO.

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[14] Varghese P. (2016). 'Reflections on a Most Fortunate Public Life', The Mandarin, 9 June 2016. Available from: http://www.themandarin.com.au/66318-peter-varghese-dfat-parting-reflections/

There is a case for the Commonwealth to apply a similar governance principle to its ongoing investment in human capital through the tertiary education system.

However, the legislative basis of the tertiary education financing system is less important than the policy objective and the political commitment to achieve it. Priority must be attached to developing and adopting a coherent and integrated approach to financing tertiary education, and to now taking long term investment decisions to achieve near universal participation rates in tertiary education in Australia.

This is a complex, demanding national-building task. It is a national project similar to that which Australia commenced over 30 year ago when we set ourselves the objective of achieving universal participation to the end of senior secondary schooling.

Thank you

The New Work Order

MS JAN OWEN, AM
CEO Foundation for Young Australians (FYA), VIC

Biography

Jan Owen is a highly regarded social entrepreneur, innovator, influencer and author, who has spent the past 25 years growing Australia's youth, social enterprise and innovation sectors. In 2012 she was named Australia's inaugural Australian Financial Review and Westpac Woman of Influence; In 2014 she received the Doctor of Letters (honoris causa) from the University of Sydney; and was awarded membership to the Order of Australia in 2000. Jan is the author of Every Childhood Lasts a Lifetime (1996) and The Future Chasers (2014). Jan is the CEO of the Foundation for Young Australians (FYA) and YLab, the global youth futures lab. Her lifelong mission is to unleash the potential of young people to lead positive change in the world.

Abstract

The workplace as we know it isn't long for this world. Beneath the seemingly benign surface of Australia's labour market, there is a quiet revolution occurring in the way we work. Across the globe, massive changes in technology, demographics and globalisation are driving an unprecedented transformation. Over the past 25 years, we have lost around 100,000 machinery operator jobs, nearly 400,000 labourers, and nearly 250,000 jobs from the technicians and trades[1]. Offsetting these losses, there has been an explosion of more than 400,000 new jobs in community and personal services. The work revolution is no less visible in what we used to call 'white collar' jobs. Computers have swept through corporate towers and small business offices, displacing nearly 500,000 secretaries and clerks. At the same time, the increasing complexity of business processes and financial markets has created 700,000 new jobs across the professional and business services.

Young people already struggle with the changing work landscape and the increasingly complex pathways into work. In Australia, nearly one in three young people are currently unemployed or underemployed.

The pace of innovation and automation sweeping through our workplaces has prompted thought leaders and policy makers to argue that young people need more transferable enterprising skills that can be used across multiple roles and occupations. There is evidence that employers are already asking for these skills yet many young people remain ill-equipped for what employers are demanding. We need to better promote these skills in our education and training systems.

The future of work, especially its inherent risks, need not be cast in stone for young Australians. The critical question for Australia is: How do we ensure that the future of work maintains reward and opportunity for all young Australians? The answer depends, in part, on our policy responses. We can take active steps to both enable young people in this future and offer protections against the risks. This paper considers steps that could be taken to prepare our young people with the skills to thrive in this New Work Order and enable young Australians to succeed. Embedding enterprise skills most commonly demanded by employers, like digital literacy, communication, teamwork, problem solving and creativity into our training systems.

The future of work is being shaped by three global forces

The future of work for young Australians will be characterised by flexibility and continuous change in how, what and where young people will work. The three key forces that will shape the future of work are: automation; globalisation; and collaboration.

Automation

Ever-smarter machines performing ever-more-human tasks

Both cognitive and manual routine jobs (procedural, rule-based activities) are well suited to smart machines and, as a result, occupations like secretaries and factory workers have increasingly been automated. However, as smart machines learn to recognise visual and language cues and develop situational adaptability (like driverless cars), the machines will increasingly compete for manual non-routine jobs and some cognitive jobs.

Over the past 25 years, the highest jobs growth has been enjoyed in occupations that are either high touch or high skill (Figure 1). The number of jobs in community and personal services has grown 87 per cent, after accounting for total growth in the labour force, and the number of jobs in professional occupations has grown 54 per cent[2].
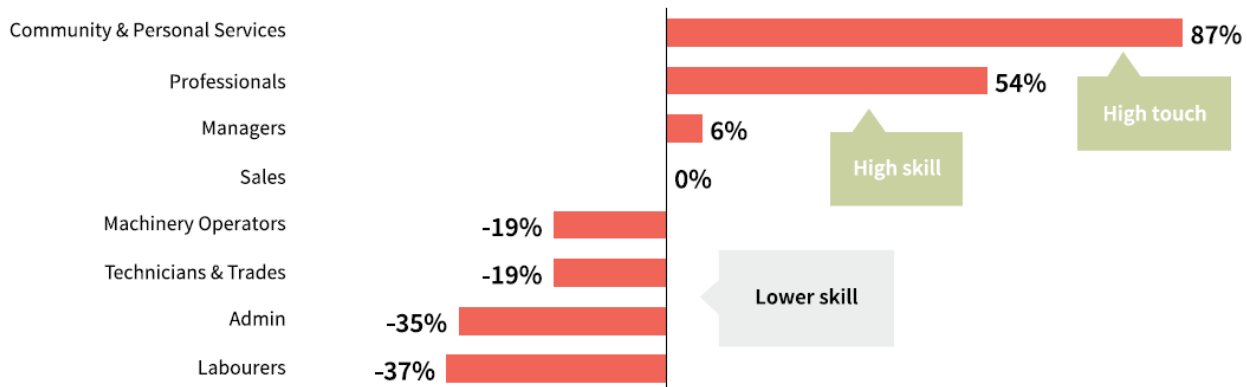
Source: ABS, AlphaBeta analysis

Figure 1   **High touch and high skill occupations**

Globalisation

Our workforce goes global and the global workforce comes to us

The globalisation of labour is not a new phenomenon. For at least 50 years, many companies have viewed their potential labour pool as global. Companies flexibly manage labour from different countries in different parts of their supply, production, distribution and sales channels. Technology intensifies the globalisation of labour, by enabling employers and workers to more easily connect and transact across geographies.

While the physical mobility of labour is nothing new, the rise of the virtual global worker is a new and potentially very disruptive force. Technology, especially digital talent platforms like Upwork, enables talent to provide their services to a global employer base and still remain in their local geography to conduct the work. In particular, online talent platforms allow companies (especially small to medium enterprises) to tap into talent from geographies that are lower cost or hyper specialised in skills. Economists have estimated that 11 per cent of the world's service jobs can be performed remotely[3].

The birth of online digital platforms will only intensify this trend. Australians will now need to compete with virtual talent from many other countries. Australian businesses are already sourcing work remotely. Before allocating work to Australians online, Australian businesses are sourcing work (especially IT work) from India, Philippines, US, Bangladesh and Pakistan[4].

Collaboration

Many jobs, with many employers, often at the same time

Since the 1990s, nearly 60 per cent of the growth in jobs across the Organisation for Economic Co-operation and Development (OECD) has been in jobs that are temporary, part-time or self-employed (see Figure 2)[5]. Recent survey data suggests that up to 30 per cent of the Australian workforce is participating in

flexible work arrangements, where they take a portfolio approach to their working life[6]. The rise of on-demand platforms like Uber, Freelancer and Airtasker are making flexible income generation more accessible.

This force is unlikely to herald the death of top firms, as this will remain the most efficient way to organise resources. However, technology will have an influential impact on firm operations with a continual rise of other flexible approaches presenting as an equal competitor.
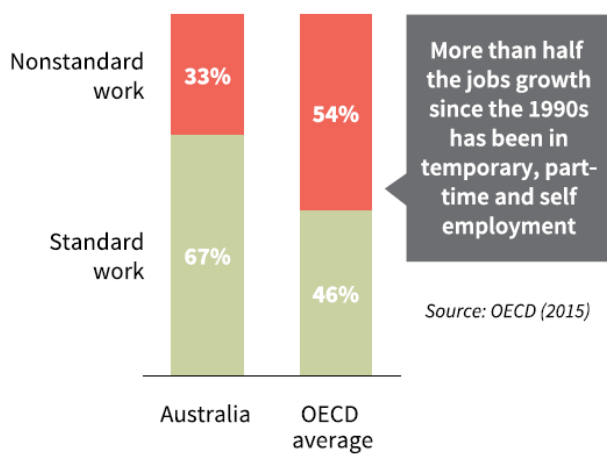
Figure 2 | Most jobs created in the OECD were temporary, part-time and self-employment

Changes to work presents both opportunity as well as risks to young Australians

The future of work is being shaped by three forces: automation; globalisation and collaboration and these are presenting opportunities, as well as risks, to Australian workers. They offer the opportunity not only for higher productivity jobs, but also more creative, independent and meaningful employment. Given their relative disadvantage in the labour market, young people are likely to bear a lion share of these risks.

Opportunities include:

Lower barriers: The barriers to entrepreneurship are falling. Technology and globalisation are making it easier and cheaper to start an enterprise.

More flexibility: New technologies and ways of working are providing unprecedented flexibility in how and where people work, which is one of the key drivers of worker happiness. Around 70 per cent of Australia's greater than 34 year olds are open to using a digital talent platform (for example Airtasker, Freelancer) to source income in the next year[7].

Wider markets and specialisation: Technology has accelerated the division of labour and enabled companies to divide up work into ever-smaller tasks that can be sourced from a global labour pool. Young people in Australia graduate from post-secondary qualifications at higher rates than OECD averages giving them a competitive advantage to access these markets.

Risks include:

Unemployment: Already nearly one in three young people in Australia are either unemployed or underemployed. The jobs that help young people get their foothold in the workforce (for example receptionists, administrative roles, checkout assistants) are dying. Around 70 per cent of young people in Australia currently enter the labour market in jobs that will be lost or radically affected by automation over the next 10–15 years[8].

Inequality: As skilled labour becomes more valuable, and unskilled labour becomes a global commodity, incomes are likely to continue to diverge. Pay for the skilled will rise, while unskilled workers will be forced to compete with low cost automation at home and foreign workers abroad. Already these forces have contributed to growing inequality in Australia. Over the past 15 years, incomes of the top 10 per cent have grown 13 per cent higher than the bottom 90 per cent. Incomes of the top 1 per cent have grown 42 per cent higher[9].

Insecurity: More than half of new jobs in advanced economies since the 1990s have been temporary, part-time or self-employed[10]. The collaborative economy presents enormous opportunities, but important questions remain unanswered: How will the collaborative economy maintain social protections? How can flexible workers access entitlements like minimum wages, insurance, sick leave and parental leave?

Employers are already demanding skills of the future and not all young people are prepared

The pace of change sweeping through our workplaces has prompted thought leaders and policy makers to argue that young people need more enterprise skills (often called 'generic', '21st century' or 'transferable' skills) that can be used across multiple roles and occupations[11]. Recently, the OECD argued that 'the increased rate of innovation across economies requires the workforce to possess both technical competence and 'generic skills'—problem solving, creativity, team work and communication skills'[12].

What skills do employers want from young people?

Rather than guessing what employers want from their entry-level and early-career hires, or relying on anecdotal or survey data, FYA looked at 4.2 million job postings from 2012 to 2015 in Australia to uncover what employers want.

1. **Demand for enterprise skills has been rising over time**

Rising demand for enterprise skills indicates that employers are increasingly valuing enterprise skills. Over the past three years, employers have listed more enterprise skills in their job advertisements. As examples, the proportion of job advertisements that demand critical thinking has increased by 158 per cent, creativity by 65 per cent, presentation skills by 25 per cent and team work by 19 per cent.

2. **Employers pay a premium for select enterprise skills**

Some enterprise skills are highly rewarded. Compared with early-career jobs that do not list these skills, on average jobs that requested presentation skills paid an additional $8,853 per year, digital literacy an additional $8,648, problem solving an additional $7,745, financial literacy an additional $5,224 and creativity an additional $3,129.

3. **Jobs of the future demand more enterprise skills**

Jobs of the future, or those jobs that are least likely to be automated, demand enterprise skills 70 per cent more frequently than jobs of the past, on average[13]. For each specific skill area (for example problem solving, communications), jobs of the future demand enterprise skills between 30 per cent and 68 per cent more than jobs of the past.

A significant minority of young people are not developing the skills they need for complex and flexible work of the future

In general young people are participating and staying in education longer and this will help prepare them for the high skilled work of the future. However, there is still a significant minority that are not developing the enterprising skills they will need for future work.

The Programme for International Student Assessment (PISA) and other agencies have tested for some enterprise skills including problem solving, digital literacy and financial literacy (Figure 3).

Preparing young people for the new work order is an issue of national importance

There is a need for us to invest in young people to ensure they are digitally literate, financially savvy, innovative and adaptable and can navigate the increasingly complex careers of the future.
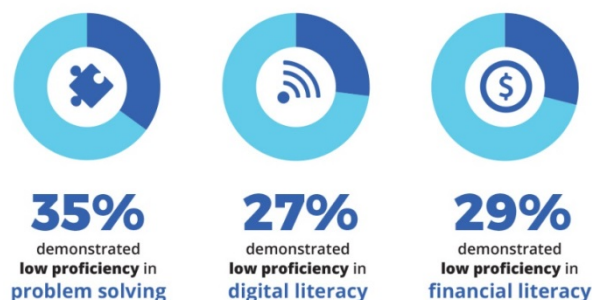

Among Australia's 15 year-olds:

35% demonstrated **low proficiency** in **problem solving**

27% demonstrated **low proficiency** in **digital literacy**

29% demonstrated **low proficiency** in **financial literacy**

Figure 3   **Proficiency of 15 years in select enterprise skills**

Having clearly understood that employer demand for these skills is increasing, we need to better support young people's development in our education and training systems. The skills most commonly demanded by employers, like communication, teamwork, problem solving, creativity, and digital literacy, can be built into our training systems in a number of ways.

Our policy choices today will determine whether Australia's young people are ready to take up the challenges of the future, for decades to come. We must act now to ensure young Australians can thrive in this new work order. FYA is calling for a National Enterprise Skills Strategy to embed enterprise skills in Australian schools and build young people's skills for the new work order.

An enterprise strategy would:

- Begin early in primary school and build consistently, year on year, throughout high school
- Be provided in ways that young people want to learn: through experience, immersion and with peers
- Provide accurate information and exposure about where future jobs will exist and the skills needed to craft and navigate multiple careers
- Engage students, schools, industry and parents in co-designing opportunities in and outside the classroom.

References

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force from the growth in number of jobs in each ANZSCO major occupation category.

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12. Toner, P. (2011), "Workforce Skills and Innovation: An Overview of Major Themes in the Literature", OECD Directorate for Science, Technology and Industry Working

13. Paper Series, SG/INNOV(2011)1, OECD Publishing p8

14. This figure reports the percentage difference between the proportions of occupations that are less likely to be automated which demand select enterprise skills and the proportion of occupations that are more likely to be automated.

What kind of education is needed to build a better world?

EMERITUS PROFESSOR COLIN POWER AM, FACE
University of Queensland
Chair of the Commonwealth Consortium for Education

Biography

Colin Power is an Adjunct Professor at the University of Queensland and Chair of the Commonwealth Consortium for Education. Formerly Professor of Education at Flinders University, he served as Deputy Director-General of UNESCO and Assistant Director-General for Education from 1989 to 2000. As such, he played a key role in international efforts to improve access to, and the quality of, education at all levels. Colin's latest book (The power of education, Springer, 2015) documents how inclusive quality education systems empower individuals, communities and nations, and what needs to be done to build the world to which we aspire.

Abstract

This paper will provide an international perspective on the challenges to be faced, how education systems are responding to these challenges and examines why some are more effective in empowering learners, communities and nations than others.

It argues that providing quality education for all throughout life is the key to building a better world, and for a vision of education that builds on the work of the International Commission on Education for the 21st Century.

Yes, educators will need to be more creative, more innovative. But improving access and quality is more about learning, about sharing knowledge, expertise and experience than de-regulation, cut-throat competition and league tables. We will need to work together both at the national and international level to build education systems that are affordable and empowering.

Increasingly, the destinies of individuals, nations and the planet are being shaped by global forces. The changes that have flowed from advances in Information Technology (IT), Science, the opening up of markets and also new concepts mean that shrinking space, shrinking time and disappearing borders are linking people's lives more deeply, more intensely and more immediately than ever before. Our common future will depend on the degree to which we all become better global citizens, working together to solve global problems and to live in harmony with each other and nature. Our collective wellbeing, even survival, will increasingly be dependent on the extent to which education contributes not only to the empowerment of individuals and nations, but to the entire global community.

The power of education

What kind of education is needed to build the world to which we aspire? To address that question, The United Nations Educational, Scientific and Cultural Organisation (UNESCO) setup an International Commission on Education for the 21st Century, chaired by Jacques Delors. The report (UNESCO, 1996) argued that education must build the strong foundations needed to continue to learn throughout life. It saw a narrow education as disempowering, insisting that education at all levels be based on four pillars: learning to know, to do, to live together and to be. Twenty years later, UNESCO (2015) reaffirmed that position, restressing the importance of education for global citizenship, lifelong learning and the responsibility we have towards each other and the planet.

My latest book (Power, 2015) focusses on the power of education to build the world to which we aspire. An empowering education lifts us up to be more than we could be. It provides us with the knowledge and skills we need to achieve what is important for us and our families. But more than this—an empowering education is emancipatory—it opens minds and doors. It develops the inner qualities needed to triumph over adversity, to fight injustice and oppression, to

be innovative, to continue to learn throughout our lives.

Empowering nations and communities

No nation or community aspires to be poor, weak and unstable. Yet many are, while others have high standards of living, and are strong, stable and vibrant. But how can we account for the huge differences? Acemoglu and Robinson (2012) suggest that the differences stem from the Political and Economic institutions that determine who has power in a society and to what ends it is used. Failing states have 'extractive institutions', institutions that are controlled by those in power at the expense of the masses. Access to education is limited, and the more divided and unequal the education system of a nation becomes, the more likely it is that the nation will fail. Conversely, the basic institutions of the most vibrant and harmonious nations are 'inclusive'. They provide the framework necessary for stability, sustainable development and social harmony. The education systems of successful nations are inclusive and empower both individuals and the nation.

Australia exemplifies the role that education plays in nation building. If it is to empower, we must learn from our successes and failures and from the experience of other nations. We will need to be more innovative in addressing the weaknesses in our education system and the global challenges facing us.

Education for all

For the foundations of development to be strong, all must have access to programmes designed to meet their basic learning needs. When I joined UNESCO in 1989, the number of out-of-school-children stood at over 130 million, drop-out rates were increasing and the number of adult illiterates had climbed to over 900 million. In developed countries, 'functional illiteracy' was, and remains, a serious problem. Ensuring all have access to quality basic education is a major global challenge. To meet that challenge, UNESCO, the United Nations Children's Emergency Fund (UNICEF), the World Bank and the United Nations Development Programme (UNDP) joined forces, pushing donors and governments to agree on targets, priorities and the action needed to make progress towards the goal of Education for All (EFA).

Over the past 25 years, the EFA global partnership has helped realise the right to basic education of millions of children, youth and adults. The number of adult illiterates has fallen to around 770 million and the number of children-out-of-school to 57 million. Gender gaps have narrowed, drop-out rates have fallen, and 91 per cent of children attend a primary school. Yet much remains to be done to meet education targets agreed by world leaders (the Sustainable Development Goals).

Australia was once one of the most equitable of the Organisation for Economic Co-operation and Development (OECD) nations in wealth, income and education, but now we are one of the least equitable. We are falling short in our responsibility to help meet the basic learning needs of all especially the poor, both at home and beyond our borders.

Learning throughout life

While retaining the traditional breakdown of the components of education, we need to remember that learning is a continuous lifelong process. We must rethink how we have structured and formalised learning in national systems of education, and what we cram into the courses, textbooks and examination systems. Have the structures we have created have become prison walls for many of the young people trapped in our education system? The greatest gift an empowering education can give is a passion for learning and a zest for life, a passion that inspires learners to become more versatile, creative and caring. As I often warn new university graduates by saying 'your degree is a milestone in your education, do not let it become a tombstone'.

The number of days Australian teachers spend on professional development is roughly half the OECD average. Ensuring that our teachers continue to learn, to update their knowledge and professional skills, is a challenge we cannot ignore.

Learning to know and to do

Learning to do is about acquiring the skills we need participate in life and work in a changing world. Whereas Australia was once in the top echelon of performance in the knowledge and skills assessed by Programme for International Student Assessment (PISA), it has now fallen to 14th place. Our top students perform well by international standards, but 11 per cent of 15 year

olds have serious problems in Reading, Mathematics and Science, a much higher proportion than countries like Finland (seven per cent).

When times are tough, there are few jobs available for new entrants to the labour market, and the available jobs are generally poorly paid and insecure. Education may not be a miracle cure for youth unemployment, but our education institutions must equip all with the basic skills needed for employment. They must engage with employers, communities and government to generate coordinated and flexible approaches to learning and earning. The government's funding package to boost youth training and employment represents a good start. Incentives are needed to encourage employers to provide internships, to which I would add government supported internships in community-service organisations. Similarly, tertiary education institutions need to do more to develop the generic skills that drive productivity and innovation in globalised workplaces, including cross-cultural competencies and communication.

Learning to be

Learning to be is about the all-round development of each individual—cognitive, social, aesthetic, physical and moral. For the most part, the focus in our education system is on knowledge and skills, particularly on those demanded by the world of work. Learning to be is about the development of our talents as individuals and a nation, but also our understanding of ourselves and the world, empowering us to do the most good we can, combining expertise with ethics. At times, educational institutions fall short, as one teacher in a Master of Business Administration (MBA) programme lamented: 'In this course we do not teach human beings, we train barracudas. As a nation, we are failing to meet our obligations under international law to meet the needs of the children of asylum seekers'.

The modern scourges of western civilisation, such as suicide, drug abuse and violence are usually explained in personal, social or economic terms. But something more fundamental is taking place in the modern world: the failure to provide a sense of meaning, belonging and purpose in our lives— what the Delors Report means by 'learning to be'. That failure creates the conditions under which violence, extremism and terrorism flourish. Young people need to have something to believe in and to live for, a sense of inclusion and connectedness. As a nation, we must do more to meet the challenge of providing an education that gives meaning and purpose to all our students, especially those 'at risk'. Empowering teachers do not give up on the children and youth who are falling behind. They expect, and work hard at helping them, to learn. Empowering schools help all their students to 'bloom where they are planted'. They nurture the treasure within, the human spirit, challenging students to strive for excellence, and to find fulfilment in life by helping others.

Innovation, Science and Technology

'When the winds of change blow, some build walls, others windmills' (Chinese proverb). Education is about empowerment, about building windmills rather than walls. An empowering education equips us with the inner resources we need to face changes, complexity and the unpredictable. Schools and tertiary institutions need to be educational 'windmills' if they are to make full use of the opportunities created by the winds of change.

To develop the skills needed to solve problems, teachers at all levels need to make greater use of well-designed inquiry, and cooperative and problem-based approaches to learning. As educators, we need to blend good teaching with smart use of the new technologies. Most innovations are the product of the work of multidisciplinary teams, sharing ideas and venturing outside the box. Innovations that improve the quality of teaching and learning stem more from educators sharing knowledge and ideas than from cut-throat competition.

Australia ranks a lowly 17th in terms of innovation. Why? Innovations build on advances in knowledge. In Australia, enrolments in Business and Law are way above those of other OECD nations, but low in Science, Technology and Engineering. This shortfall, combined with the relatively low status of teachers, make it difficult to recruit and retain well qualified Science, Mathematics and IT teachers. One ought not to be surprised that quality of teaching and levels of achievement in Science and Mathematics are falling. This is a challenge that must be addressed if we are to achieve the goals of the innovation agenda.

The funding challenge

Education is both a basic human right and a public good. It is one of the best investments that an individual or a nation can make, yielding a wide range of economic, social, health and cultural benefits. In economic terms alone, OECD estimates put the net rate of return for tertiary education at 8.9 per cent for individuals and 13.4 per cent for the nation as a whole. Countries investing in quality education for all are those enjoying the most rapid and sustained economic growth and the highest quality of life. Given that individuals and society benefit from investing in education, it is not unreasonable to expect the cost burden to be shared. Australia's total level of investment in education is slightly above the OECD average, but what has changed is that individuals and families are bearing more of the cost burden. In the 1970s, Australia was one of the few nations where public investment in education exceeded seven per cent of the Gross Domestic Product (GDP), but it has now fallen to 26th place among the OECD countries.

The challenge is to find funding solutions that are fair and affordable. At all levels of education, needs-based funding along the lines of the Gonski model is necessary to assure fairness, equity and quality. At the tertiary level, HECS-HELP has helped, but what if fees and debt levels climb? More public and private scholarships, debt relief via discounts contingent on performance, debt swaps for community service, and education-industry joint ventures are possibilities to be considered. Deregulation would only make things worse.

Global warming

Of all the challenges facing us, global warming and climate change pose the most serious threat to our common future. The reports of the Intergovernmental Panel on Climate Change (IPCC) paint a gloomy picture of our planet's future. To facilitate the professional development of teachers, it makes sense to use the United Nations (UN) website (http://sustainabledevelopment.un.org) and UNESCO's multi-media packages (for example Teaching and Learning for a Sustainable Future). It is imperative that all young people and adults be empowered as global citizens with the knowledge, skills and determination needed to tackle the challenges we face as our planet warms. Ensuring that education for sustainable development is a priority is a challenge yet to be met.

Global citizenship: Learning to live together

The number of students crossing borders has tripled in the last 20 years. Increasingly as well, our graduates are finding work overseas. If current trends continue, the combination of international assessments of student achievement, cross-border education, advances in Information and Communications Technology (ICT) and global commercial activity in education goods and services will continue to grow exponentially, accelerating the internationalisation of education systems. Internationalisation creates new opportunities for enhancing international understanding and cooperation. However, the driving force in the global education market seems to be self-interest. We must use the opportunities created by internationalisation to educate for global citizenship, for unity in diversity, not just to prop up our tertiary institutions.

Education for global citizenship is about opening minds and doors to the wider world. It seeks to deepen our understanding of other countries, peoples, cultures and ways of life in order to create a world where all human beings live together and with nature in peaceful co-existence. That means that in the teaching and curriculum of all areas (especially the Arts, Humanities and Social Sciences) more attention needs to be given to the treasures within all of the world's cultures, and to the ideas and people have helped to build a better world.

Throughout human history, the quest to build the world to which we aspire has been about a shared destiny, about the common good, about basic rights and freedoms, about justice and equity. We need to learn to live and work together for the common good, or perish. We must meet the challenge of educating for responsible global citizenship.

Conclusion

To empower learners, communities and nations, education must be of high quality, inclusive and lifelong. But education empowers only if it leads to learning, that is, to the development of knowledge, expertise, talents and values, and to the wise and ethical use of that knowledge and expertise. Quality education empowers communities, nations and humanity as a whole—

but only if it is equally accessible to all, and certainly not if what is provided to the masses is restricted and/or of poor quality. If nations work together to ensure an empowering education is accessible to all throughout their lives, a quiet revolution is set in motion: education becomes the engine of sustainable development and the key to a better world.

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Presentations

Learning to create preferred futures: Theorising informal and incidental learning in hybrid community learning spaces

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Biography

Catherine H. Arden is a Lecturer in Adult and Vocational Education the School of Linguistics, Adult and Specialist Education at the Toowoomba campus of the University of Southern Queensland, Australia. Catherine's research interests include informal and lifelong learning, community capacity-building, university–community engagement, Community Informatics, digital inclusion and community information literacy.

Located in USQ's Australian Digital Futures Institute, Catherine's doctoral research was an investigation into learning in a rural Community Informatics project called GraniteNet (www.granitenet.com.au). Using phenomenography, community members' diverse experiences of informal learning were investigated focussing on interrogation of conceptions and experiences of learning related to digital technologies and literacies.

Abstract

Education plays a critical role in preserving social cohesion and democracy by enabling individuals to contribute to, and participate fully in, civil society (Kalantzis & Cope, 2001). How, then, do community educators use their influence to equip individuals with the capacity to actively participate in rural community life in a network society and digital era? Which theories are relevant to helping individuals, communities and governments understand and address this challenge?

To propose some answers to these questions, the author draws on the findings of her research into adult and youth learners' experiences of informal learning in a rural Community Informatics project called GraniteNet. Phenomenographic analysis of participants' conceptions and experiences of learning in the context of their involvement in GraniteNet's hybrid sociotechnical learning and working environments revealed seven qualitatively different, structurally related ways of experiencing learning in this context. The findings support theorising about the nature, extent and significance of informal and incidental learning and contribute to knowledge about how learning is experienced outside of formal education, focussing on the "far more diverse forms of learning in which people engage" (Edwards et al, 2002 p. 529), including learning embedded in people's social participation in community life in a digital era.

Introduction

In addition to serving the needs of a nation's economy by building its human capital, education plays a critical role in preserving social cohesion and democracy by enabling individuals to contribute to, and participate fully in, civil society (Kalantzis & Cope, 2001). However, 'old' understandings of civil society and citizenship no longer hold sway in the digital era, where a very different set of technological, economic, and cultural conditions are at play to those of the industrial age in which our education system was forged (Kalantzis & Cope, 2001). This requires a broader and more inclusive conception of what constitutes a 'good education' that includes a valuing of different kinds of learning, an emphasis on the linkages among the different learning areas and arenas (Illeris, 2006), and a revisiting of pedagogies, approaches, and educational arrangements that facilitate 'new learning' (Kalantzis & Cope, 2001, p. 55).

Central to the achievement of more diverse and holistic educational goals is an increased recognition of the importance of learning that

occurs 'outside the academy' (Edwards, Gallacher, & Whittaker, 2006), including learning embedded in people's active participation in local community life. As the education sector firmly located in the context of civil society, closest to the community and embracing an informal and learner-centred approach, the Adult Community Education sector and community-based models such as geographical or proximate Learning Communities are seen as being well placed to support delivery of the 'new learning' advocated by Kalantzis and Cope (2001, p. 55). How, then, do community educators use their influence to equip individuals with the capacity to actively participate in rural community life in a network society and digital era? Which theories are relevant to helping individuals, communities, educators, and governments understand and address this challenge? To propose some answers to these questions, the author draws on the findings of her research into adult and youth learners' experiences of informal learning in a rural Learning Community–Community Informatics project called GraniteNet.

The GraniteNet Project

Like Australia, many nations have recognised the need to maximise the benefits of the social aspects of emerging digital information technologies for the public good and are 'working on strategies that will prepare them for an information society that includes a concept of civil society as a target for skills development, engagement, decision-making, and societal cohesion' (Taylor, Schauder, & Johanson, 2005 p. 4). Such strategies include the Learning Communities movement, in which towns, cities, and communities adopt a 'learning-based approach to community development . . . with a framework in which lifelong learning is the organising principle and social goal' (Faris, 2005, p. 31) and Community Informatics projects in which grass-roots, community technology projects seek to leverage digital Information Communications Technologies and the Internet in the interests of supporting the achievement of community development goals (Gurstein, 2001). One such initiative is GraniteNet, established in 2006 in the town of Stanthorpe in South-East Queensland with the aim of harnessing the possibilities presented by digital technologies and the Internet for enhanced social connectivity, community networking, and engagement in lifelong and life-wide learning.

The GraniteNet project resulted in the formation of the local community-based organisation, GraniteNet Incorporated, managed and operated exclusively by volunteers. The organisation hosts the GraniteNet community web portal (www.granitenet.com.au) as an online network for local community groups and operates the GraniteNet community technology hub in the town's central business district, which includes a Seniors' Kiosk where older community members can access basic digital skills training. Figure 1[1] is a screen shot of the GraniteNet community portal home page from February 2016. The doctoral study on which this paper draws investigated these younger and older community volunteers' informal learning experiences in the context of their involvement in GraniteNet's physical and virtual activities at a high point in the organisation's development during 2012.

Conceptual Framework and Methodology

Phenomenography, as an approach to investigating learning from the learners' perspective (Marton, 1988; Marton & Booth, 1997), was chosen to investigate the nature of volunteers' learning in GraniteNet. Structured phenomenographic interviews were conducted with a purposive sample of 20 individuals drawn from among the members of GraniteNet's diverse communities and networks of interest and practice to probe conceptions and experiences of learning to illuminate three different learning aspects adapted from Marton (1988, p. 5):

i.   The experience of the learning process

ii.   Different ways of understanding the content learnt

iii. Describing conceptions of the world around us (in this case, GraniteNet as the learning context).

Together, these learning aspects constitute the study's conceptual and analytical framework illustrated in Figure 2 below. The diagram shows the study's unit of analysis (conceptions of learning in GraniteNet) at the centre and draws the three aspects—content, process, and context and environment—together to address both research questions, thus serving as a holistic framework to 'frame' (Harris, 2011, p. 110) the study's design and to guide data analysis and interpretation. On the basis of the findings of this

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[1] All figures appear at the end of this paper.

investigation, conclusions were drawn about how learning in the context of GraniteNet is experienced.

Figure 3 shows the characteristics of the respondent sample, highlighting the heterogeneity required in phenomenographic studies and case-study research (Akerlind, 2002; Marton & Booth, 1997; Sin, 2010; Stake, 2005).

Findings: Conceptions and experiences of learning in GraniteNet

Phenomenographic analysis of interview transcripts and mind maps completed by respondents at the beginning of the interviews revealed seven distinct and logically related conceptions of learning in GraniteNet, reflecting the range of qualitatively different ways GraniteNet participants perceive and experience learning in the context of their involvement in GraniteNet's activities and use of the community web portal.[2] These seven categories of description coalesced into four distinct groupings, as illustrated in Table 1. Consistent with phenomenographic research conventions, the meaning of the conception of learning in each category—in terms of how learning in GraniteNet is actually experienced by respondents adopting that particular conception—is reflected in each category's title.

What are people learning?

Significant and valuable learning was discovered for respondents in a diverse range of content areas. Table 2 presents this learning content organised into seven content domains, mapped to their relevant categories in the study's outcome space in which this content is thematised[3]. In addition to the categories traditionally used to describe learning content in formal education settings, such as knowledge, skills, and attitudes, for example, the conception of learning content in Table 2 uses 'much more far-reaching categories' (Illeris, 2006, p. 74) to reflect the breadth and depth of meanings, understandings, and dispositions inherent in respondents' own expressions of their learning.

These findings confirm those reported in the literature on learning in associational life and volunteer work based on studies conducted in the UK, Australia, the US, and Canada that emphasise the variety of learning opportunities afforded by small-scale voluntary and community-based organisations 'across the spectrum of adult learning' (Kerka, 1998, p. 1) along with the breadth, depth, and significance of this learning (Field, 2005; McGivney, 2006; Shugurensky & Mundel, 2005; Schugurensky, Duguid, & Mundel, 2010). However, the findings expand on those commonly reported in this literature, showing significant, valuable, and pervasive learning for GraniteNet volunteers at the intersections of particular content domains afforded, in part, by GraniteNet's organisational characteristics and culture as a Community Informatics and Learning Community initiative. Further, the findings show the experience of the content learning across the seven content domains to be strongly interrelated and interconnected, with learning in the Technology/Socio-technical domain implicated in learning in each of the other domains in important ways, as illustrated in Figure 4.

Learning content at the intersection of learning in the Technology/Socio-technical, Community and Learning domains (that is, learning about and learning to use digital technologies in GraniteNet) can be theorised as a spectrum of community socio-technical literacy practices. Critical to this theorising is the recognition that in the digital age, the social contexts in which literacy practices are embedded are essentially socio-technical contexts; that is, 'combinations of social relations and information communications technologies' (Resnick, 2002, p. 649). Situated within this broader socio-technical context, GraniteNet is seen as a socio-technical learning environment, with learning experienced both as acquisition of generic skills and as a function of social participation (Wenger, 2009) in communities and networks of interest and practice (Fischer, Rhode, & Wulf, 2006). From this perspective, literacy is conceptualised as a specific practice, or set of practices (Thorpe & Mayes, 2009) embedded in social contexts. Literacy practices are therefore seen as social practices (Lupton & Bruce, 2010). Further, digital literacy is seen as 'a current instantiation of the traditional concept of literacy itself' (Bawden, 2001, p. 21) in the context of the digital era. This spectrum of community socio-technical literacy practices is presented in Figure 5.

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[2] Representative quotations from the interview transcripts and copies of respondents' mind maps constitute the empirical evidence supporting the researcher's analysis and interpretations of the data These empirical data, along with the details of the data analysis procedures used, are available and will be provided on request

[3] In phenomonography, a phenomenon is said to be thematised when it can be 'explicitly talked about and discussed and can be the object of conscious planning and analysis' (Saljo, 1979, cited in Richardson, 1999, p. 56).

Table 1   **Categories of description in the outcome space: Conceptions and experiences of learning in GraniteNet**

Category	Conception of GraniteNet	Conception of digital technologies	Conception of Learning
Category 1: Frontier learning conception ('Seniors' Kiosk customer' perspective)	Community technology 'school' *Where you can go to get your learning*	*A frontier* *A can of worms*	Conquering a technology frontier
Community of Practice Group			
Category 2: Community service learning conception A. Altruistic B. Vocational C. Leadership	Community service/welfare *A family; a social network* Community service workplace *A friendly workplace* Social enterprise A risky *business*	*A frontier* *A lifeline* Tools, personal equipment (*gear, stuff*) + expanding digital horizons Essential commodities, tools for living and working in a digital age	*A two-way street* A two-way street with signposts Stepping up
Communities of Interest Cluster			
Category 3: Community Information Literacy / Social Inclusion conception	Community Noticeboard/Lifeline *A publicity exercise; a way of having a lifeline for people*	*A way of bringing the community together*	Learning to connect with my community
Category 4: Blended community Learning conception	La vie associative online *My community group online*	*A place to do all those community things*	*Interacting with the community in groups and things like that.*
Community Development Cluster			
Category 5: Digital Stewardship/ Enterprise Learning conception	A virtual community *My local community online*	*A kind of realm*	*All of this is really my ball park*
Category 6: Community Technology Capacity-building conception	A community utility, asset *A way of strengthening the community*	*A window to the world; a window to the community*	*Empowering people; explaining to people; helping people*
Category 7: Learning Community Conception	*A learning community catalyst; the hub of the learning community*	*A conduit for a raft of learning opportunities*	*Everything in life is an informal learning activity*

How are people learning?

The study's findings show this learning to be first and foremost a function of people's social participation (Wenger, 2009) or interaction (Illeris, 2006) in the context of their community volunteering in GraniteNet's hybrid socio-technical learning and working environments . Against this backdrop of learning as social participation, the data reveal multiple learning processes reflected in conceptions across all categories in the study's outcome space. A learning process is understood here as an activity involving the learner's agency in acquiring, knowing, and making use of the learning content (Marton & Booth, 1997), although this may occur incidentally, 'as a by-product of another activity involving intentional learning' (Mezirow, 2000, p. 5). Learning may also be experienced as an individual or a collective phenomenon, but is always practical and predominantly relational in nature. Learning processes include observation and imitation; practice (as repetition or overlearning); problem-solving, trial-and-error (or 'trying out' or experimentation) (Eraut, 2004); benchmarking; performing allocated or self-initiated tasks and fulfilling particular roles in the community of practice; learning through communication, cooperation, participation and exchange; learning through helping others to learn; learning through collaborative problem-solving, experimentation and inquiry, and through self-directed research, deliberation, and reflection in and on action (Schön, 1991). Learning in GraniteNet also includes browsing for, sharing and evaluating information and learning through the construction of artefacts (reification) (Wenger, White, & Smith, 2009) and through information and knowledge exchange, networking, connection, construction, and bricolage.[1]

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[1] The term *bricolage* is used in the literature reviewed for this study to refer to improvisations in technology-rich environments as 'tinkering through the combination of resources at hand' to solve real-world technology-related problems (Ali & Bailur, 2007, p. 5)

Table 2   **Content domains and their specific content mapped to categories in the phenomenographic outcome space**

Content Domains	Specific Content	Conceptions of learning in GraniteNet
1. **Technology/ Socio-technical**	• Digital literacies (basic and more advanced) including learning about and learning to use digital technologies for a range of purposes • (Digital) Community Information Literacy • GraniteNet Content Editor Skills Set • Web design/development • Programming skills • Technology stewarding • Community Informatics	Cat 1: Frontier learning conception Cat 2: (Community) service learning conception Cat 3: Community Information Literacy/Social inclusion conception Cat 4: Blended community learning conception Cat 5: Digital stewardship/Enterprise learning conception Cat 6: Community technology capacity building conception Cat 7: Learning community conception
2. **Learning**	• Understanding and facilitating adults' (digital learning) literacy • Meta-learning (learning about one's own learning) including digital meta-learning • Community Information Literacy (learning about one's own and other people's information needs) • (Blended) Community learning • Informal learning • Action Learning/ Action Research • Lifelong Learning	Cat 2: (Community) service learning conception Cat 3: Community Information Literacy/Social inclusion conception Cat 4: Blended community learning conception Cat 5: Digital stewardship/Enterprise learning conception Cat 6: Community technology capacity building conception Cat 7: Learning community conception
3. **Community**	• Civic engagement/participatory democracy • Local community knowledge (Community Information Literacy) • Blended community learning • Community Informatics • Community Development • Community Learning	Cat 1: Frontier learning conception Cat 2: (Community) service learning conception Cat 3: Community Information Literacy/Social inclusion conception Cat 4: Blended community learning conception Cat 5: Digital stewardship/Enterprise learning conception Cat 6: Community technology capacity building conception Cat 7: Learning community conception
4. **Special Interest**	• Knowledge and skills in the specialised domain of the Community of Interest (COI) (includes digital technologies / computing and local community as special interest areas)	Cat 3: Community Information Literacy/Social inclusion conception Cat 4: Blended community learning conception Cat 5: Digital stewardship/Enterprise learning conception
5. **Vocational**	• Vocational competencies and literacies (various occupational fields) • Career development learning • Enterprise learning	Cat 2B: (Community) service learning conception—Vocational emphasis Cat 5: Digital stewardship/Enterprise learning conception
6. **Personal/ Relational**	• Self-efficacy, self-confidence, personal agency, personal development • Generic and 'soft' skills (such as interpersonal and communication skills, social competence, social literacy, social awareness • Leadership	Cat 1: Frontier learning conception Cat 2: (Community) service learning conception
7. **Organisational/ Associational**	• Organisational knowledge and know-how • Participatory democracy • Organisational governance, management, administration (community-based) • Organisational development	Cat 2: (Community) service learning conception

What makes this learning possible?

In answering the question about what makes learning possible in GraniteNet, consideration is given to both learning incentives and learning mechanisms. In his discussion of what he refers to as the 'incentive dimension of learning', Illeris (2006, p. 26) notes that the experience of learning, including the content that is learnt, is always 'marked' by the nature of the learning incentive that has motivated the learner's engagement in

learning. This includes the learner's attitude, motivation, and volition (Illeris, 2006). Family, organisational, and community affiliation (membership and belonging), altruism (helping others), and learning opportunism (seeking out and taking advantage of learning opportunities) emerge in the data as significant learning motivators or incentives in the conceptions of learning in GraniteNet across the categories in the study's outcome space. With respect to theorising about processes and mechanisms of informal learning, the study's findings showed significant and valuable learning for GraniteNet volunteers to be consistently:

- motivated by a blend of altruism, interest-based learning opportunism, a need or desire for social participation, a strong affiliation with the local community and underpinned by a shared commitment to the community group's or organisation's mission (Elsdon, 1995);

- afforded by opportunities to contribute to the work of the community group or organisation in the form of participation in the organisation's activities. Ideally, this includes 'an equal opportunity to participate in the various roles of discourse' (Mezirow, 2009, p. 91), which is afforded through the practices of participatory democracy in a supportive environment that enables 'friendship, reciprocity and trust' to develop (Field, 2005, p. 140) and where there is an organisational commitment to supporting the learning of its members (Elsdon, 1995; Wenger, White, & Smith, 2009).

Figure 6 presents in diagrammatic form the primary learning incentives, processes, and mechanisms reflected in the conceptions of learning in the study's outcome space, highlighting the centrality of social participation as the over-arching incentive for and mechanism of learning in GraniteNet, with its inherent processes of interaction, communication, connection, information, and, as a result, exposure to variation.

Discussion

Against the backdrop of this broad theoretical framework, the findings reveal the precise nature of the experience of learning in GraniteNet to be primarily dependant on:

i.   the nature of the particular community organisational volunteering role that the individual is performing at the time, and related to this, whether they are experiencing learning in GraniteNet from the perspective of a Customer, Provider, shared Customer/Provider, or Developer perspective;

ii. whether the individual's participation is situated in community volunteering activities occurring primarily in a face-to-face organisational setting, in a blended or hybrid face-to-face –virtual setting that 'combines digital interactions with offline encounters' (Field, 2005, p. 140), or, indeed, primarily in a web-based environment;

iii. the individual's age, in terms of whether or not he/she could be classified as a younger community volunteer (Livingstone & Scholtz, 2010; Shurugrensky et al., 2010) and 'digital native' or as a 'third age learner' (Hazzlewood, 2003, p. 1) and as a 'digital immigrant' (Prensky, 2001, pp. 1–2).[1]

For those volunteers whose involvement is primarily in the context of their participation in the face-to-face activities of the GraniteNet community technology hub, significant personal development learning, organisational learning and community learning are situated in participation in the GraniteNet Community of Practice (CoP). At its best, the affordances of the GraniteNet CoP for learning in community with others—and in the service of others—are realised through advantage gained from the synergies generated by the alchemy of altruism, learning opportunism, a strong sense of (local) community, an interest in digital technologies, a sense of shared purpose, and reciprocal learning and collective action nurtured in the crucible of a positive learning and working environment. Under optimal conditions, learning whilst making a valued contribution to the community is the catalyst for personally significant and meaningful intentional and incidental relational learning, which in this conception is mutual and reciprocal (a 'two-way street'). For those who step up and assume

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[1] The term 'digital native' is by Prensky (2001) to describe 'the first generations to grow up with' digital technologies and the internet and who are therefore 'native speakers' (p. 1) of the digital language of computers, video games and the internet. Digital immigrants are described by Prensky (2001) as those who were not born into, but who have learned to adapt to, the digital world and who have 'a digital immigrant accent' or 'foot in the past' (p. 2).

leadership roles, collective deliberative learning involves personal and organisational transformation including the 'collaborative construction of ideas in practice' (Carroll, 2009, p. viii) and social enterprising activity in the form of the development of community-owned socio-technical infrastructures. These can, in turn, have a capacity-building effect on the local community (Eversole, Barraket, & Luke, 2014). With respect to the question of optimal conditions for such learning to occur, the findings confirm those from earlier studies that report a strong link between the quality and trajectory of individuals' learning and engagement and the well-being of the organisation (Elsdon, 1995; Duguid, Mundel, Schugurensky, & Haggerty, 2013).

The findings also show significant and valuable learning for volunteers in the areas of Community Information Literacy, and Blended Community Learning and Community Informatics as different forms of intentional and incidental practical learning. This is situated in the socio-technical literacy practices of the community group Content Editor and GraniteNet Technology Steward roles performed in the context of GraniteNet's hybrid socio-technical learning and working environment of the community web portal. This theorising about community-based socio-technical literacy practices helps to clarify the specific nature of the 'information practices that enable people to use information effectively' (Bruce, 2008b, p. 6) to 'learn with and from each other' (Bruce, 2008a, p.vi) in the context of rural community and associational life and also contributes to knowledge about the information practices of 'an informed citizenry' (Bruce, 2008b, p. 6) in the digital age.

The findings about the significant personal, vocational, and career-development learning experienced by younger community volunteers through their participation in the GraniteNet CoP suggest this to be a form of Intentional Relational learning involving processes of mutual enhancement (Eraut, 2004), metacognitive monitoring (Eraut, 2011), and reflective appraisal (McIlveen et al., 2011) linked to participation in

formal vocational education and training. Eraut (2004) refers to this as 'integrative learning' whilst Illeris (2006) describes this kind of learning as 'transversal learning' where 'targeted learning efforts [that] aim at creating firm connections between the different learning spaces and sub-spaces (pp. 230–1). The findings show this learning for younger GraniteNet volunteers to be motivated by an interest in digital technologies and a strong sense of learning opportunism enriched by a growing commitment to the host organisation's 'learning and social or caring objectives' (Elsdon, 1995, p. 120) influenced by their respected 'elders' (Illich, 1971) within the organisation, as 'expert others' . This provides confirmation of the unique learning affordances of third sector, 'place-based' communities of practice (Somerville & McIlwee, 2011, p. 326) with a social mission and a whole-of-community development agenda for younger community members' lifelong and life-wide learning.

Conclusion

The author concurs with Merriam, Caffarella, and Baumgartner (2007, p. 430) that 'informal learning contexts, including social action and community-based learning, are where much of adult learning takes place . . . [and that as adult educators and researchers] we need only see them as sites for learning' to be able to explore and better understand, and make visible, the dynamics and complexity of this learning. With reference to the question of educators' roles and purposes (Merriam et al., 2007), adult and community educators are presumably concerned with the job of 'empowering all those who want to share what they know' (Illich, 1971, p. 44) with others and to do so in ways that are most likely to achieve the desired results. Thus, adult and community educators as community-learning experts can help shape new community-learning futures by promoting and facilitating informal community learning and, thereby, supporting delivery of the 'new learning' advocated by Kalantzis and Cope (2001, p. 55) and helping to 'cultivate the possible' (Bruner, 2012, p. 29).

Figures

Figure 1   **The GraniteNet community portal home page (February, 2016)**
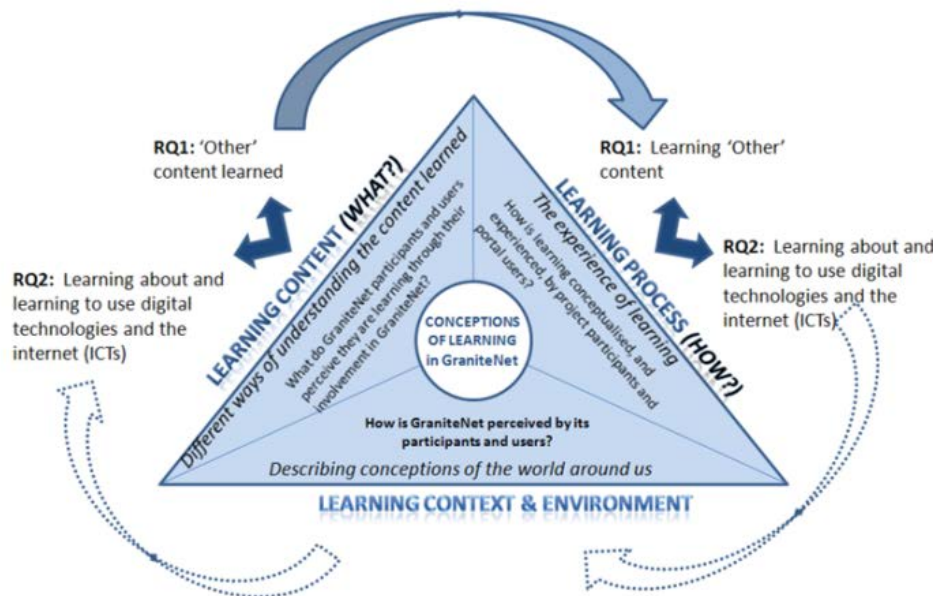
Figure 2   **Holistic conceptual and analytical framework incorporating what/how framework (adapted from Marton, 1998; Marton& Booth, 1997)**
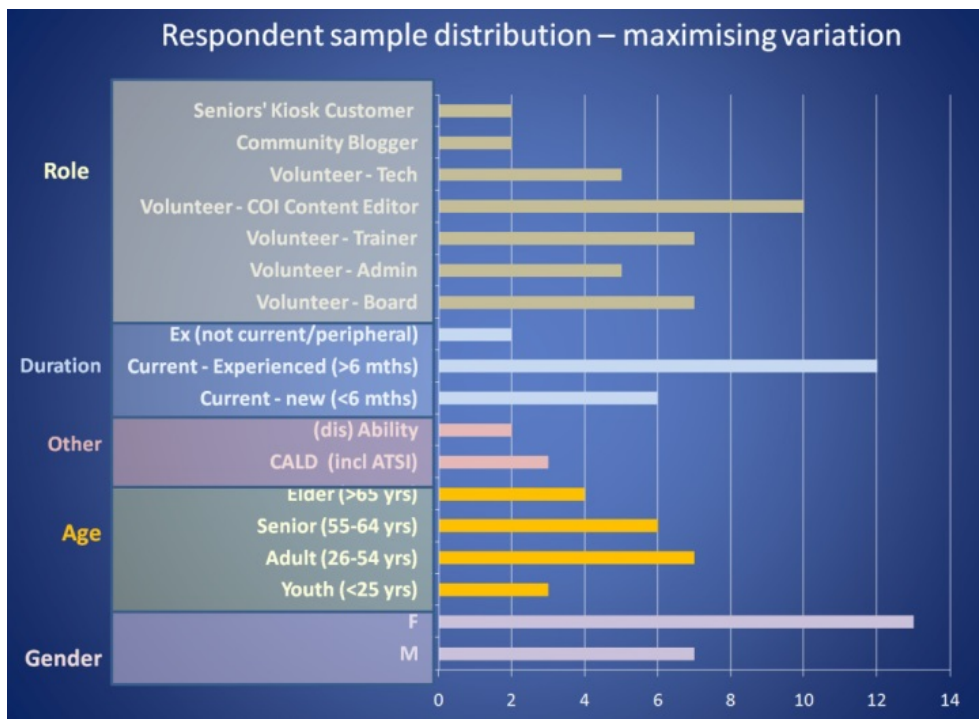
Figure 3   Participant characteristics: Age, gender, cultural and linguistic background, disability or impairment, and nature and duration of involvement in GraniteNet
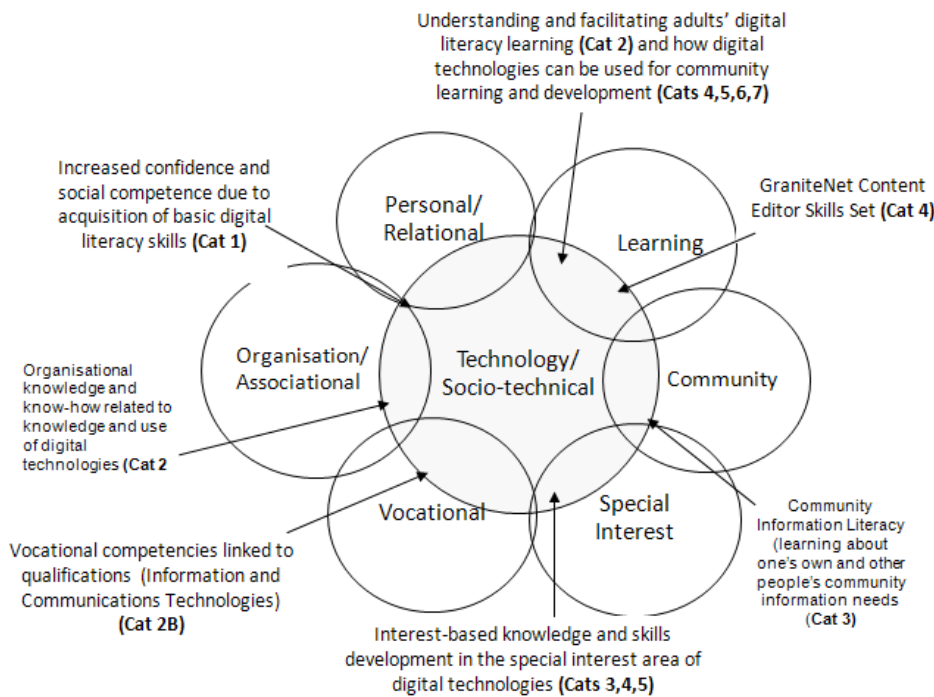
Figure 4   Learning content in the Technology/Socio-technical domain central to and implicated in learning in all other content domains
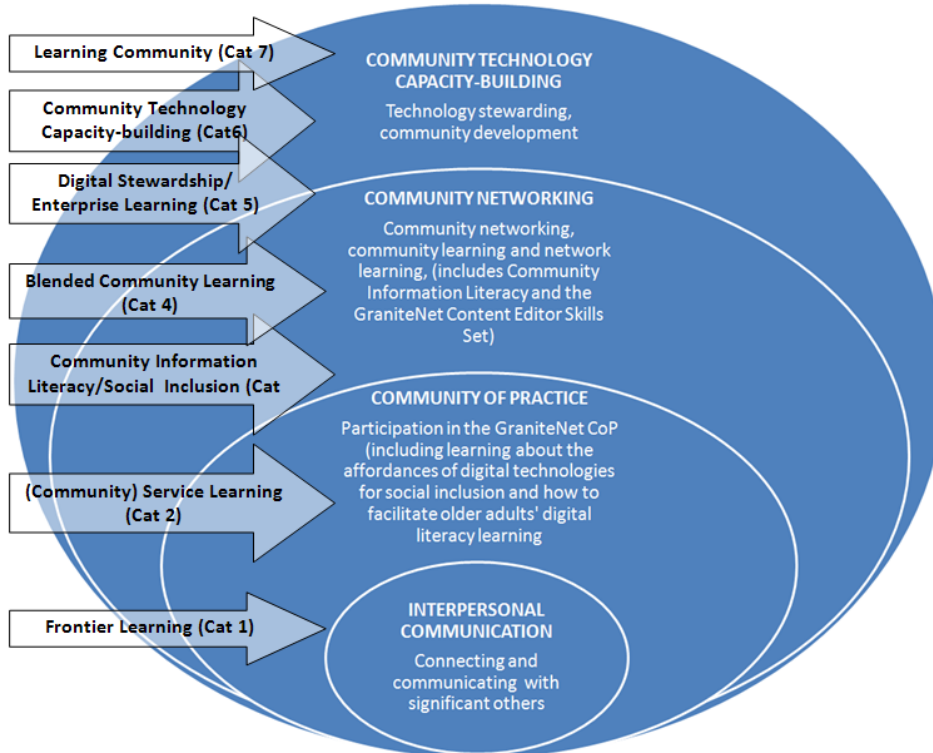
Figure 5   Learning about and learning to use digital technologies in GraniteNet: A spectrum of community socio-technical literacy practices
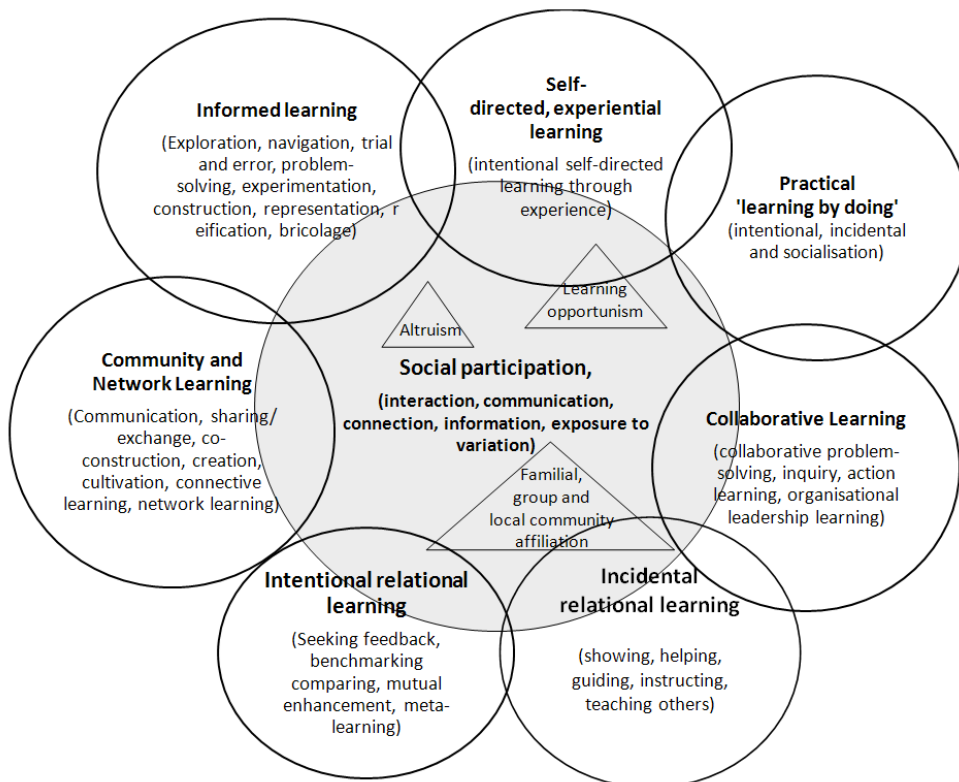
Figure6   Learning processes, learning mechanisms and learning incentives

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Educating for sustainable rural futures

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Biography

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Abstract

Futures research, using current trends and events, can produce predictions of challenges for rural communities. Events include government decisions, changes in legislation, company takeovers and business decisions, fluctuations in markets and global markets in particular, social change, increasing urbanisation, and pressure on natural resources. In this paper identified probable and preferred futures will be used to highlight work likely to be required of members of rural communities in the future to ensure their sustainability. Some ways in which education can equip rural students to contribute to building preferred futures will be outlined. This research is conducted with the vision of ensuring students in rural education, who remain living in rural communities, will be equipped for community leadership for futures which are likely to be challenging and require innovative and imaginative solutions.

Introduction

Just as the past and the present in education are researched, so is the future researchable (Gough, 2010). This paper will present a summary of research exploring rural futures, and draw inferences about what is required to support sustainability for rural communities into the future and how education can contribute. The focus is on equipping students, who will continue to live in rural communities, so they are able to build preferred futures for themselves and their communities. That is, education focused answers can be found to question what needs to happen in order for future rural residents and rural communities to take some power over their destinies, over what happens to their sustainability socially, economically and environmentally (Lockie, Lawrence, & Cheshire, 2006).

It is important to pay attention to the education provided for those who will continue to live in rural communities otherwise they will struggle to remain viable (Carr & Kefalas, 2009). Those who continue to live in rural communities are likely to be disadvantaged compared with the majority of the population living in the large metropolitan

centres (Cloke, 2006b). For the purposes of this paper a broad and general definition of rural is used, with rural equating to non-metropolitan, places located away from major metropolitan sites. There is much diversity encompassed in this definition of rural.

Sher and Sher (1994), in a review of education in rural Australia, focused on identifying strategies for advancing 'rural development' through education and entrepreneurship. They pointed out that students in rural schools are heading towards three separate life trajectories: leaving; remaining in their rural community; or moving between rural and metropolitan locations over their lives. The success of local schools is usually focused on students succeeding academically and leaving for further education and careers in other locations (Carr & Kefalas, 2009; Corbett, 2007) with less focus on students who do not wish to leave their rural community. Carr and Kefalas (2009) argue that it is necessary to look at how education is equipping students for the full range of aspirations, including those who will remain in their rural community as their skills will be important for rural communities into the future.

Often educators urge successful students in rural schools to leave for brighter futures in metropolitan locations (Corbett, 2007; Tieken, 2014). Rural schools have a complex mission (Sher & Sher, 1994).

The key research question for this paper is: what can research into rural futures show about the education needed today to equip students for likely future challenges in their working lives and their rural communities? The goal of this paper is to present ideas on how educators can equip the rural students of today to meet and survive tomorrow's challenges well and build sustain preferred lifestyles in rural Australia. Futures research methodology (Gough, 2010) will be introduced, and data collection and analysis methods outlined. A discussion of ways in which education can help to equip young people for the future will follow.

Research methodology and method

Gough (2010) points out that futures are presented in policies and documents in one of three ways: 'tacit' unexplained presentations of the future; through reference forward in time, 'token futures'; used to rationalise choices or decisions that have been made on other grounds; and 'taken-for-granted futures', presenting an unchallengeable view of the future. The alternative is to adopt a methodological approach to futures study. For this futures research two approaches are used: anticipating the future and an eclectic approach (Gough, 2010). Gough indicates three broad categories of anticipation of futures: 'probable' futures; drawing on present events and trends; 'possible' futures, or what is imagined as possible; and 'preferred' futures developed by exploring the implications of possible alternatives. A comparison between probable futures and preferred futures is used as a way of developing an outline of what education would ideally provide, particularly for students who will remain in rural Australia, the 'stayers' (Carr & Kefalas, 2009; Corbett, 2007; Sher & Sher, 1994). The second of Gough's approaches is what he terms 'an eclectic approach to sources and methods' with four different images of alternative futures - extrapolation, consensus, creative imagination, and combining these images. Extrapolation is the consideration of present trends and events, identifying how these could continue into the future, and what these may mean for rural futures. Data considered as 'consensus' for this project is

literature focused on rural studies where the authors have analysed what is occurring in rural locations in Australia and internationally. These two approaches have been adopted, leaving the imaginative methodology for another time.

While rural education has been viewed as problematic in the past (National Inquiry into Rural and Remote Education (Australia), 2000), the discussions in the present deal with similar problems. While there are examples of success in individual rural schools (for example, Mypolonga PS) and innovation in schools such as Cowell Area School (both in rural South Australia), futures research enables a forward looking approach. Data for this research is a set of news articles collected in 2014 over a four month period from newspapers in South Australia, principally from *The Advertiser*, but also from a small rural newspaper the *Northern Argus*, the *Stock Journal* and *The Australian*, with some further articles added in 2015. Initially articles were selected if they had any relevance to rural South Australia, or rural Australia. As the collection of articles grew, selection became more focused on assisting in the identification of issues or stories of actions important for rural Australia, either more generally, or for particular parts of rural Australia.

Three themes selected for initial coding are the key aspects of sustainability - social (including health), economic and ecological (Black, 2005; Lockie et al., 2006). A further theme, political, was added, as governments can have a significant impact on rural communities. Given the method of selecting newspaper articles a count of items in each category was not appropriate. The intention of *The Advertiser* to influence state and federal politics around policies of water usage in the Murray made a count of articles even less appropriate. A surprisingly small number of articles about rural issues appeared in the state and national papers. Issues that did warrant an article were generally detailing problems that are also of concern to metropolitan readers, perhaps to be anticipated given a large proportion of the population, and therefore the readership, is principally in metropolitan locations.

Rural studies literature argues that most changes in rural Australia are part of global trends. Firstly, worldwide there is a movement of people from rural locations to urban locations (Cloke, 2006a), and this is also the case for Australia where the rural population is declining in real terms and as a

proportion of the population (Australian Bureau of Statistics, 2016). A declining population means less support for businesses and a reduced demand for services, and an increased likelihood of their demise or withdrawal. Rural Australia is also strongly influenced by neoliberalism and the changing markets which have resulted (Lockie et al., 2006). Continuing changes in rural communities are leading to different futures to those anticipated in previous years (Carr & Kefalas, 2009; Corbett, 2007; Edmondson, 2003; Tieken, 2014).

A preferred future for rural Australia is for people to be able to live sustainably, to earn sufficient income and have access to facilities and benefits commonly available to Australians. Satisfying lives are envisaged where the rural population is not drawn to metropolitan centres in search of opportunities and facilities. Ideally, when a rural community is negatively impacted by change community members are able to identify new opportunities and work towards achieving these. Possibly the most complex element of this preferred rural future is the notion of living sustainably, particularly in relation to ecological sustainability. As business owners have faced pressures arising from participation in the global market, but also during times of disaster such as droughts, ways are sought to continue to be profitable and earn an income, to become more entrepreneurial and self-sufficient. In these circumstances decisions are likely to be made which compromise ecological sustainability.

Analysis and discussion

Data from news articles coded as related to social life in rural Australia included deficit views of rural education, and students failing to achieve academic results equivalent to their metropolitan peers. Formal and informal opportunities for learning post-school were evident. The declining population and the goal of governments to reduce expenditure lead to newspaper articles about reduction of services, particularly health services. Continuing involvement of local people in volunteering roles was reported, along with stories of volunteers providing emergency services, and construction and maintenance of local community facilities. The social implications of the allocation of water resources were being discussed on a daily basis in *The Advertiser*.

Social sustainability requires that rural people are able to access, comprehend and critique important information. In the case of volunteers in the emergency services, individuals need to be able to acquire sets of skills which can be quite sophisticated and sufficient to enable them to stand in place of professionals (health, management of disaster situations and so forth) for a period of time. Where change is occurring, community members need to advocate for their communities, successfully developing arguments and striving to persuade people beyond their community of their particular need.

News articles, relevant to economic activity in rural communities, indicated ways in which rural businesses and communities can be subject to the actions of others well beyond their local place. The failure of large projects (for example, mining) and their impact on rural communities were reported. The relationship between local producers and their markets, both national and global, were shown to have an impact on both input costs and prices received for products. Several large manufacturers were reported to have suddenly and unexpectedly ceased to buy the output of primary producers or significantly reduced the price they were prepared to pay (for example milk, grapes). Another concern for some primary producers were the activities of animal rights groups who had managed to impede markets and compromise businesses, and to seek changed management practices.

Rural individuals and groups seeking to remain economically sustainable showed constructive and innovative problem solving. Success stories in the food related industries included the development of unique products (specialist lamb, quality pork) and selling of value-added goods into niche markets (stone ground flour, whole grain pasta products). These were achievements built on understanding of markets and the legislative requirements for the processing and marketing of food products, and the ability to develop unique products. Sustaining businesses, whether for food products, fibres or mined ores, also depends on developing strategies to reduce uncertainty as much as possible, including through analysis of global production and changing markets (through quaternary products).

Newspaper articles focused on ecological issues were dominated by concerns about the Murray-Darling Basin. Other ecological issues included

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the declining quality of soils, flora and fauna, coasts and marine ecosystems and the complexity of their management. There were reports of community concerns about the destruction of landscapes and degradation of water resources as a result of mining. Another concern was the possible introduction of new pests and diseases which could destroy viable industries.

Rural residents can take a role in the management of natural resources. But to do so they need to engage with reading and preparing plans and regulations based on a good knowledge of the resource, and to be effective advocates for particular points of views. Where rural people need to comply with new plans and regulations it is important to understand what is required, and to research and identify new ways of working within the regulations and sourcing new practices and technologies to assist with economic viability.

Trends identified in texts relevant to political issues showed that important decisions are made outside the community through new legal requirements. Other political decisions involved the provision or withdrawal of infrastructure and facilities, including roads, hospitals, and technology. Local government provision of services is becoming more important. Participation in political processes is important for everyone, but is particularly important for rural people who need to ensure representation of the views and the needs of a minority of the population who are located away from metropolitan centres where decisions are made. Advocacy for rural people is also important where decisions made prove to be counter to their needs, and when assistance is needed in the aftermath of disasters.

Conclusion

An examination of these probable futures and how rural people need to respond in order to build a preferred future highlights the importance of quality education for rural students, particularly for those who in the future will be managing businesses, and leading through volunteering or advocating for their community. In particular they need to access, critique and utilise information, and learn new skills as work in rural locations changes. They need to critique relevant laws and regulations. Being critical and creative thinkers both in business and in dealing with local challenges will be important. Where change and

innovative thinking are needed at a community or industry level people with leadership and communication skills will be vital. A systematic analysis of futures, identification of students' learning needs and development of appropriate pedagogies to develop the desired outcomes will help to build stronger rural communities with education playing a key role.

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Changes and challenges: Is our education system equipped to prepare students for a brave new world?

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Biography

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Abstract

This paper proposes that the current climate of education in Australia prepares students for a future that is based on a systemic idea of success, rather than individual needs and wants. Drawing upon anecdotal evidence, educational research and policy claims to quantify the argument throughout the paper, there is an initial exploration of the need for change in the academic and social domains of general and special education, respectively. In the subsequent discussion of global changes and challenges and the implications for education, the paper looks closely at the role of the educator in developing students' understanding of global change, as well as the need for active advocacy of diverse post-school options within the classroom. Ultimately, this paper illustrates the need to transform our current, narrow conception of a 'future focus' in education into one that supports students to participate in a world that they will make their own.

Early philosophers and political luminaries often lauded education as the catalyst for affecting profound global change. In contemporary Australia, however, education's global focus has shifted from affecting change to inciting competition. Educational authorities justify the current performative culture of education as the vehicle for students to engage and prosper in society, and ultimately, to compete in a globalised world (ACARA, 2010). The rhetoric surrounding this future focus has had a profound impact on the context and purpose of teaching and learning in Australia. As such, this paper will problematise the culture of national education through two lenses: changes and challenges in education and changes and challenges in building the world to which *we* aspire, and in doing so, uncover fundamental systemic paradoxes and confronting truths about the efficacy of Australian education in preparing students for their futures.

An examination of changes and challenges in education is not a discrete process; the contested nature of education currently means that they are inextricably tied. Although my professional experience so far is limited. I have come to realise that contextualising changes in the national education system is best articulated not in terms of what is, but what should be. Across my practicum placements, I have consistently observed pedagogies that are shaped exclusively by mandated requirements, creating an environment of pressure, accountability and ultimately, a 'future' focus that is short-term, narrow and predicated on a universal ideal of success. This paradigm has barely shifted from my experiences at school, leading me to the conclusion that, in a world that is changing so rapidly, education has become stagnant. Even though Australia's education system is touted by many as dynamic, inclusive and intellectually rigorous, the consistency borne of uniform performance expectations highlighted to me a need for transformative change. However, this need for change is complicated by the competing discourses that shape our education system. The prominence and pressure of standardisation and the concurrent, ironic emphasis on differentiated practice has created a system that is clouded by competing priorities. Therefore, the ambiguity of values in our education system foregrounds the

need for significant change to create clarity of purpose.

Furthermore, the intimate connection between changes and challenges in our education system is particularly prominent when examining the degree to which social issues are acknowledged and addressed. Such a narrow focus on accountability, data collection and qualitative achievement in education has insidiously impacted the attention given to social issues. Indeed, McGaw (as cited in Atweh & Singh, 2011) has suggested that even though data from standardised tests indicates that Australia has a high quality education system, it performs less well in dealing with issues of educational inequality. In my practicum settings, the notion of equality has commonly been viewed as something automatically addressed by legislation, creating the misperception that nothing further needs to be done to optimise access, participation and achievement in education for students with special needs. Furthermore, I have observed that students with special needs who are educated in inclusive settings are often negatively stigmatised by classroom teachers. As such, these students tend to adjust their performance and participation in class in accordance with the teacher's expectations. Thus, the need for change in education clearly extends beyond the academic sphere.

An examination of change in relation to building the world to which we aspire is underpinned by an understanding of the nature of global change itself. In a world that is increasingly diverse and rapidly developing, formal education cannot possibly claim to teach children everything they need to know. While Australian Curriculum, Assessment and Reporting Authority (ACARA) (as cited in Casinader, 2016) claimed that the Australian Curriculum addresses the knowledge, understanding and skills needed for life and work in the 21st century, I would argue that the linearity of the curriculum belies the constantly changing and inherently dynamic nature of the world in which we live. However, as teachers we can manipulate the context and practise of the curriculum in order to heighten students' sense of position in the global context. Using an activity like a role play that considers both students' roles and responsibilities in the world and key developmental considerations, like technological evolution, in conjunction with curriculum content might give students a more authentic understanding of global change and their role within that. As such, while the concept of global

change is difficult terrain to traverse with students, it can be navigated without tokenism or passive engagement.

While the notion of 'inclusive aspiration' suggested by creating the world to which we aspire is admirable, it is a challenge in and of itself. Constructing a 'cohesive', inclusive world cannot be a global endeavour, simply because we strive to foster a sense of self-determination in our students that is entirely unique–I pluralised 'future' in my introduction for this very reason. For example, again based on my experiences in special education, the world to which some students aspire might be gainful employment and a sense of subjective wellbeing. As such, it is critical that we use our position as classroom teachers to acknowledge and celebrate the inherently unique and diverse futures and opportunities that are presented to our students. This might be achieved through parental involvement and, when appropriate, tailoring contexts for assessment and learning activities to reflect students' specific post-school goals and aspirations. In spite of the difficulty of creating a universally inclusive world, teachers can advocate the potential and possibilities present for all students in their post-school lives.

In summary, an examination and analysis of changes and challenges in national education has revealed significant tensions in terms of a 'future focus'. While affecting significant change to such intransigent discourses is undoubtedly an incremental process, it is imperative that our parochial systemic views of education are broadened. Ultimately, we need to strive for an educational paradigm that focuses less on competition in a globalised world and promotes the individual's ability to contribute to, participate and learn in a world that, despite perennial change, really is what they make it.

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Leadership for international mindedness

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Biography

Paul Kidson has 12 years' experience as a principal in non-government schools in NSW, including at a school offering three IB programmes. Over the past 7 years, he has provided leadership coaching and mentoring for aspiring and early career principals. Paul was awarded a Faculty Medal for his Master of Education (Honours) research. He is a Fellow of the Australian Institute of Management, a graduate of the Australian Institute of Company Directors and serves on the ACE Policy Committee (2016-2017).

Abstract

In the wake of global strife and turmoil, the need for education to promote peace and international mindedness is particularly acute. Australian schools offering programmes of the International Baccalaureate (IB) have the potential to do so on account of their commitment to developing students who 'show empathy, compassion and respect' (IBO 2016) and who 'thoughtfully consider the world and our own ideas and experience' (IBO, 2016). Paul will be presenting current research into how principals of Australian IB schools exercise their leadership toward these goals.

Introduction

If education is truly the power 'to build the world to which we aspire', recent global conflicts highlight an ever more urgent need. One educational framework, the International Baccalaureate (IB), claims its programs 'develop inquiring, knowledgeable, and caring young people who help to create a better and more peaceful world through intercultural understanding and respect' (IBO, 2014, p. i).

The IB commenced in Australia when Narrabundah College (ACT) introduced the Diploma Programme (DP) (Bagnall, 1997). It is now available in 163 Australian schools (IBO, 2016) and seeks to develop International Mindedness (IM). Given a prime responsibility of the principal is to develop and maintain school vision and culture (AITSL, 2014; Dinham, 2008; Gurr, 2014) it is surprising no research to date has explored how principals of Australian IB schools address this. This paper focuses on participants' views about IM as one aspect of school culture, drawn from larger research on principal leadership within Australian IB schools.

Overview of IB Programs

The IB emerged from within a group of international schools whose highly mobile populations experienced significant challenges addressing matriculation. International schools that offered multiple national credentials found their provision expensive and tended to divide the international school community along national lines (Peterson, 2003). From this grew the Diploma Programme, first offered in 1968. Although matriculation focused, it was designed within a broad liberal philosophy to also cater for non-tertiary bound students (Peterson, 2003).

By 1980 development of a program to articulate into the DP was underway. Advocates of the idea were experienced DP educators and their discussions reflected an underlying DP philosophy (Hill, 2003). The Middle Years Programme (MYP) emerged from these discussions. By contrast, the development of the Primary Years Programme (PYP) emerged from discussions around a lack of a coherent international education program among European international schools. The European Council of International Schools (ECIS) established an International Schools' Curriculum Project, supported by the IB. By 1997 the IB assumed responsibility for the project,

renaming it the PYP (Hill, 2003). More recently, the IB developed a Career-related Programme (CP) (IBO, 2012). Taken together, the four separate programs (Hallinger, Lee, & Walker, 2011; Hallinger, Walker, & Lee, 2010) provide a 'continuum of international education for students aged three to 19' (IBO, 2012, p. 1); no Australian school offers all four programs.

## 'International' education and the IB: An unclear distinction

The scale of the IB in Australia has grown remarkably. From a matriculation credential for a small number of non-national students, it is now offered across the entire schooling age range by schools committed to IM. Critical and research literatures, however, indicate the concept of IM is unclear and highly contested (Resnik, 2012; van Oord, 2007; Wells, 2011).

The decision to introduce the IB at Narrabundah College was contextualised by an international student population drawn from Canberra's diplomatic community, but the next phase of growth was predominantly in non-government schools lacking this context. By 2005 non-government schools represented 46 of the 53 IB schools (Bagnall, 2005) and the DP was the largest program represented, offered in 35 of the 53 schools. Market differentiation motivation, rather than philosophy or pedagogy, was strong (Bagnall, 2005; Doherty, 2009, 2013; Gardner-McTaggart, 2014).

However, since 2005 the profile of the IB across Australia has changed. While non-government schools represent the majority of IB schools (65 per cent), there is significant growth in the PYP in government schools (see Figure 1 below). Matriculation is not relevant to these contexts, so greater emphasis is placed on development of IM (Gough, Sharpley, Vander Pal, & Griffiths, 2014).

IM is not clearly defined in major IB publications (IBO, 2012, 2014). This lack of definition underpins a range of critiques. From inception, tensions existed between progressive liberal-humanistic ideals and pragmatic issues of curriculum integrity and university recognition (Tarc, 2009), while social and academic elitism criticism remains current (Doherty, 2012; Gardner-McTaggart, 2014). Emphasis on developing intercultural skills to support global, corporate, or individualistic goals can assume

greater priority than intercultural understanding (Tarc, 2009).
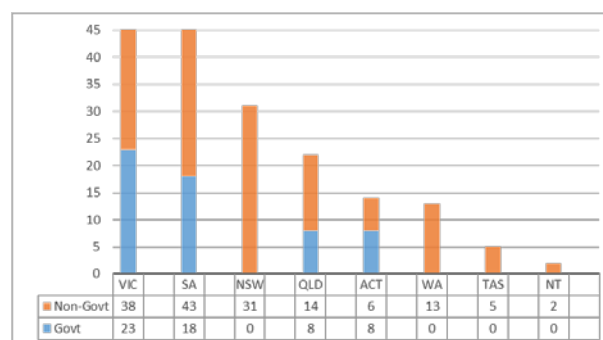
Figure 1   IB programs by jurisdiction and sector (IBO, 2016)

Claims by the IB to develop IM are therefore contestable. An underpinning Western epistemology (Tate, 2013; van Oord, 2007) and failure to take into consideration post-colonial critiques (Hughes, 2009) further weaken these claims. Van Oord (2008) argues a lack of agreement on how culture may be defined means educators may include in their conception of 'culture' behaviours and values which are merely different to one's own. International emphases may undermine national educational priorities (Bagnall, 2005) and schools adopting the IB reflect socially elite motivations inconsistent with social equity priorities (Doherty, 2012, 2013).

Little research has been conducted on IM in Australian IB schools. Only one study (Sripikash, Singh, & Qi, 2014) has been located: a three country study (Australia, China, India) that focuses only on the DP. No research has been undertaken into how principals of Australian IB schools understand IM and support its development in Australian IB schools. The absence of this research suggested use of an exploratory case study method (Yin, 2014).

Methodology

Data reported here were collected as part of a larger exploratory two-phase sequential mixed-methods (Biesta, 2012) inquiry into principal leadership within Australian IB schools. Multiple case studies (Yin, 2014) were identified (Table 1 below) using stratified purposive sampling (Miles & Huberman, 1994; Robson & McCartan, 2016). The strata used to guide sampling (Teddlie & Yu, 2007) were:

- governance (state and sector)

- number of IB programmes (between 1 and 3)
- enrolment (gender and size)
- length of IB authorisation.

Maximum variation sampling identified eight participants. Three cases identified were government schools, consistent with the

demographic analysis of the total population. Unfortunately, three different State Government Departments did not give their consent for inclusion. Credible theoretical saturation (Charmaz, 2014) was reached with the remaining seven cases.

Table 1   Case descriptions

G/NG[1]	#	Range	Years[2]	Programs			Enrol	C/G/B[3]	ICSEA[4]
				PYP	MYP	DP			
G	1	R-7	12	✓	✓		435	C	1101
G	2	8-12	27			✓	1733	C	1147
NG	1	K-12	1	✓			1100	C	1131
NG	2	K-12	16			✓	872	G	1189
NG	3	R-12	21	✓	✓	✓	1074	B	1147
NG	4	K-12	8	✓			1109	C/G	1183
NG	5	K-12	25	✓		✓	2982	C	1172

Notes:
1. Government/non-government. State identification excluded for confidentiality
2. Length IB programs within the school
3. Coeducational (C)/Girls only (G)/Boys only (B)
4. Index of Community Socio-Educational Advantage. Mean=1000; SD=100

Semi-structured interviews (Robson & McCartan, 2016) were recorded, transcribed, and provided to participants for approval. Transcripts were analysed using thematic analysis (Braun & Clarke, 2006; Robson & McCartan, 2016). Participant comments included in this paper are identified by governance mode and number.

Findings

Lack of definition
A clear definition of international mindedness was not given by any participant. Participants used general language about 'internationalism' (NG5), 'globalised' (NG3) and 'global perspective' (G1). Most identified IM as part of a pedagogical framework which broadens educational experience for students and staff:

> *We're expanding the opportunities for teachers and families to access the best practices in the world, and to be sharing with a huge collegiate of teachers in classrooms with different cultural views (NG5).*

> *I see it as part of my obligation to create an environment … where [students] are exposed to different ideas, thoughts, relationships, cultures and so on (NG2).*

> *It's looking outside your local area and understanding other peoples' points of view (NG4).*

Personal commitment
Despite this lack of definition, participants indicated IM is integral to their educational beliefs:

> *I have a very strong belief that in an increasingly globalised world we need to be looking beyond our own gates (NG3).*

> *I've always believed that children these days live in a global world. They are part it; that's not just a cliché, they are (NG1).*

> *I have lived and studied and worked … overseas and so from a personal standpoint … the world seems a bigger place, and understanding that even cultures that look very similar can actually at fundamental levels be very different … that is deeply important (NG2).*

Joining an IB school opened broader visions for some principals who had no prior IB experience:

> *The attraction for me was that this was really big, big thinking stuff, with like-minded people from all around the world, cutting across backgrounds and barriers, that's what appealed to me (NG1).*

> *The fact this school had … the IB program and had lots of other opportunities, and that it was so rich in terms of its cultural diversity. It was just perfect (G2).*

Constraining pragmatics

Bureaucratic demands of governors and parental expectations for high quality National Assessment Program – Literacy and Numeracy (NAPLAN)/matriculation results create frustrations. Governors 'judge it from external measures' (NG4), leading one principal to acknowledge 'we [will] have to come to the hard decision about what is viable' (NG5). To counter these pressures, principals give constant messages that 'academic performance is just one part … of a true, holistic education' (NG5) and 'once [parents] get some presentations and understandings about it … focus away from data and proving that we were better than the neighbouring schools' (G1), but admitted this was possible on the basis 'our data is [sic] not in any way, shape or form [adversely] impacted by being IB' (G1). Pressures about performance were referred to by all but one principal; despite it being 'immensely costly to run … [governors] have never questioned that. It seems to be fully accepted as a given that it is a good thing' (NG2).

Intentional advocacy

Emphasising IM is intentional. One principal 'generated this static of noise around what the IB might look like' (NG1) by providing readings and sending staff to conferences and other schools, another aims to 'regularly talk and put front and centre our engagement with the world' (NG1), another talks about how 'it connects us with a community of educators and educational leaders' (NG3), and still another does so 'through talking about our values' (G2).

Principal advocacy also emphasises local needs so the IB does not overtake determining how an IB school operates, such as the following:

> We have to make decisions about what is best for our students … and sometimes, those things do come into conflict with some of the requirements of the [IB] … I've had some concerns about some of the areas that I think the IB have gotten into in terms of saying what you must and must not do with your school … I don't think that's responsible educational decision making (NG3).

Implementation costs

The perceived benefits of the IB come at a considerable financial cost, even for socioeducationally advantaged schools (average ICSEA = 1153). All principals referred to financial obligations to provide staff training, IB registration costs and, in those schools offering

the DP, viability of class sizes: 'it's expensive, just dollar value, in every way … we have to invest in the credentials, the regulations, the compliance and all of those things' (NG2). 'Taking people overseas' (NG1) for IB training 'puts a strain on a school' (NG4). These pressures are more acute for government school principals; they acknowledged 'the system isn't fully supportive' (G1) and 'I think the IB is somewhat inconvenient … the fact that we're involved … is an awkwardness, but a tolerated awkwardness' (G2). Despite this, no principal indicated their school would cease future involvement with the IB.

IB and the Australian Curriculum

Principals in schools offering the PYP and/or DP expressed views that the IB was pedagogically robust and exceeded the requirements of the Australian Curriculum, although the administrative work needed to do so was considerable:

> [It is] more rigorous … it actually has a philosophy (NG2).

> I think there is coherence in the framework, which is really helpful (NG3).

> We know we're ticking the boxes for ACARA … in actual fact, we are ticking more boxes than the Australian Curriculum, Assessment and Reporting Authority (ACARA) (G1).

> We go to great pains to make sure our framework … fits the requirements of ACARA (NG5).

Criticism was directed towards some state versions of the Australian Curriculum:

> The burden of compliance … the unbelievably poor process of curriculum design and curriculum regulation … government regulation of schools only serves to pull us down (NG2).

Meeting the requirements of both the MYP and the Australian Curriculum is not easy and a source of particular dissatisfaction:

> [Teachers] would rather work within the IB framework and be free of the state-based doctrines … my understanding about the MYP is that it's worse (NG1; currently PYP only, but well advanced in the process of authorisation for MYP).

> The manpower we have to invest in the credentials, the regulations, the compliance and all of those things [is] one of the reasons I'm absolutely not interested in introducing the MYP (NG2).

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Discussion

This research is an exploratory study of principals' views about IM in Australian IB schools. Participants view the IB as an expansive, enabling framework which does have efficacy for developing IM (Gough et al., 2014); yet three dualities (Keller, 2015) create ongoing challenges for principals:

1. Idealism and pragmatism:

Tension is evident between the ideals of 'a better and more peaceful world through intercultural understanding and respect' (IBO, 2014, p. i) and the press for academic performance. Such tension has long history (Tarc, 2009) and shows little likelihood of diminishing, particularly given the rise of neo-liberal policy agendas, which promote achievement in large scale testing (Connell, 2013; Lingard & Sellar, 2013; Ragusa & Bousfield, 2015). Furthermore, considerable time and energy are required to integrate IB, national, and state frameworks (Bagnall, Wilson, & Hu, 2015; Campbell, Chittleborough, Jobling, Tytler, & Doig, 2013; Dixon, Charles, Moss, Hubber, & Pitt, 2014). These challenges highlight the important task principals have of 'navigating and propagating rituals, myths, metaphors and images' (Hill, 2014, p. 187) to ensure IM is visible and compelling for their school community (Branson, 2007);

2. Pedagogy and compliance

The requirement to meet Commonwealth, State, and IB compliance obligations creates additional pressures for principals in supporting the work of teachers (Moos, Krejsler, & Kofod, 2008). The intrusiveness of the IB for administrative and compliance purposes distracts principals from more effective instructional leadership practices (Robinson, Lloyd, & Rowe, 2008);

3. Cost and benefit

Extensive costs associated with the IB mitigate wider adoption of its educational vision, especially for government schools. This reflects Doherty's (2012) view that market imperatives limit more idealistic aims (Doherty, 2009), yet market differentiation (Doherty, 2012, 2013) did not feature among participants as a rationale for offering IB programmes. This suggests more philosophical rationales among the case schools. However, it may also only indicate that these particular schools do not experience market pressures such as those identified by Doherty (2013). Further exploration is required into what market pressures exist amongst Australian IB schools more broadly, given Doherty's (2013) study was limited to three sites and this current study to seven.

Conclusion

IB schools rely on effective principal leadership to 'develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect' (IBO, 2014, p. i). Participants in this research are committed to international mindedness and prioritise its development, but philosophical tensions, performance expectations, and high costs suggest the benefits of the IB are likely to remain unavailable to the majority of Australian schools (Gardner-McTaggart, 2014).

These findings will be further tested in Phase Two of this study. A quantitative survey questionnaire based on Phase One results will be distributed to principals of all Australian IB schools and results compared to Phase One data; publication is anticipated for 2017.

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Systems thinking for system reform: Developing leaders, schools and networks for the future we want in education

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Biographies

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Richard Owens specialises in the areas of professional and organisational learning, leadership development, collaboration and school improvement. Richard has delivered presentations, workshops and programs for educators, school administrators, network leaders and government officials from Australia, Singapore, South Korea, Finland, Chile and Brazil.

Abstract

Internationally, over the past 20 years, the education reform movement has often been characterised by its strong calls for an increased focus on creativity, innovation, collaboration and problem solving in classrooms (Perkins, 1992; Goh, 1997; McGuinness, 1999; Resnick, 2001; Victorian Department of Education and Training, 2003; Queensland Department of Education, 2004; Claxton, 2008; Boix-Mansilla, 2010; Partnership for 21st Century Skills, 2011). Significantly, advocacy in this area has frequently been accompanied by the frustrated recognition that our outdated education systems and models for schooling are ill equipped to meet this challenge (Senge, 1996; Hargreaves, 2003; Fullan, 2011; Wagner, 2012; Hallgarten, Hannon, & Beresford, 2015; Owens, 2016). This paper examines the approach of one school network to the challenge of developing future-focused classrooms through an explicit focus on building leadership capacity in relation to creative problem solving, team learning, and systems thinking. The presentation will investigate the impact of the program upon leadership development, teacher collaboration, student learning, and network development. New knowledge and understanding will also be shared regarding how systems-thinking approaches can influence leader learning and classroom innovation.

The future for student learning

As they move into adulthood the students who are presently studying in our schools will face an unprecedented range of systemic challenges brought about by globalisation, advancing technology, poverty, inequity, climate change, and cultural collision (Owens, 2014). In order to develop solutions to these problems they will need to transcend our existing ways of thinking and acting, while developing collaborative partnerships between individuals, communities, and institutions that support long term, global responses (Senge, Smith, Kruschwitz, Laur, & Schley, 2008). If we see education as offering the best hope for equipping students for success in this uncertain future, then we need to take action to ensure our schools and school systems are aligned with, and are able to support, these aspirations. Increasingly, the global debate is no longer about whether or

not we need to change our approach to education, but rather how it can be best pursued (Darling-Hammond & Bellanca, 2010; Fullan, 2011; Wagner, 2012; Hallgarten et al., 2015).

So, what does future-focused education look like? While the context for educational innovation varies greatly around the world, the international reform movement has often been characterised by its strong calls for an increased focus on creativity, innovation, collaboration, and problem solving in classrooms (Perkins, 1992; Goh, 1997; McGuinness, 1999; Resnick, 2001; Victorian Department of Education and Training, 2003; Claxton, 2008). This movement retains a focus on helping students to achieve strong outcomes in traditional discipline areas, while also developing the personal, cognitive, emotional, and interpersonal skills that will help them adapt to the challenges of the 21st century (Ritchhart & Perkins, 2008; Boix-Mansilla, 2010; Partnership for 21st Century Skills, 2011; Lucas, Claxton, & Spencer, 2013; Goleman & Senge 2014). Significantly, some of its most ambitious elements are aimed at enabling students to live in diverse cultural settings through teaching and learning focused on global citizenship (International Baccalaureate Organisation, 2000; United Nations, 2014; Jacobs 2015).

The need for system reform

Advocacy for future-focused education has frequently been accompanied by a frustrated recognition that our outdated education systems and models for schooling are ill equipped to meet the challenge of bringing such a vision into being (Senge, 1996; Fullan, 2011; Wagner, 2012; Lucas et al., 2013; Hallgarten, Hannon & Beresford, 2015). While some large-scale, 'top-down' initiatives have achieved success, their accomplishments have mainly been focused on traditional and narrowly defined goals in relation to Literacy and Numeracy (Hargreaves & Shirley, 2012). Significantly, more progressive, 'bottom-up' innovations have also proved problematic in terms of their ability to be successfully scaled up across a system and, in some instances where they have had a wider impact, to be sustainable over time (Elmore, 1996). If we desire to build a large-scale focus across our school systems on the competencies being identified as critical for success in the 21st century, then it is clear that we need a more supportive, sophisticated, and

flexible approach to reform (Hargreaves & Ainscow, 2015).

System leadership

While system leadership is still emerging as a field of study and practice in education, it is well grounded in the rich history of work on organisational development and learning (Mayo, 1933; Argyris & Schön, 1978; Senge, 1990; Schein, 1992). Within the education literature there has been a strong focus on enabling high performing principals to support other leaders and their schools in the pursuit of improved student-learning outcomes (Caldwell, 2006; Higham, Hopkins & Matthews, 2009). We have also seen movement beyond traditional conceptions of school based leadership to the consideration of system-level roles that support analytical investigation, entrepreneurship, and cross-sector alliances (Hargreaves, 2011). More recently, Hallgarten et al., (2015) have taken this thinking further, advocating for new leadership approaches that prioritise the nurturing of innovation at all levels of a system through a sustained focus on collaboration, adaptation, centralised support for radical disruption and localised approaches to curriculum design.

With a high level of national interest in school improvement, researchers have begun to explore the efficacy of different approaches to promoting system leadership and the development of system leaders. One noticeable trend has been the study of district-level leadership and the influence it has on the instructional practices prioritised and supported across a given region (Spillane, 1996; Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004). Another important focus has been on the investigation of large-scale approaches to reform, including the professional development of principal and regional leaders, and the corresponding influence they have on implementing change across a system (Matthews, Moorman, & Nusche, 2008; Stoll, Moorman & Rahm, 2008). However, relatively little research has focused on exploring the realities of leaders' experiences as they take on the challenge of systems thinking, with a need to more closely examine the interactions and dynamics that support the development of their knowledge, skills, and understandings, as well as the impact of their practice on the systems in which they work.

The Leading Teacher Teams program

This paper explores the approach of one international school network to the challenge of developing future-oriented teaching and learning in classrooms through an explicit focus on building leadership capacity in relation to creative problem solving, team learning, and systems thinking. The *Leading Teacher Teams* program aims to help mid-level leaders learn how to facilitate inquiry and innovation with their teams, while incorporating evidence-informed strategies for improvement. It builds from an initial focus on self-development to explore leadership in relation to collaboration and the improvement of teaching and learning. While it draws upon a range of theories and practices, Senge's (1990) work on the learning organisation is a central focus for the program.

The program is conducted over the course of 12 months and uses a blended-delivery model that incorporates onsite workshops and online learning, with an emphasis on the work-based application of research-based strategies and approaches. The program is currently running in Singapore, Thailand, and Vietnam, with planning under way to expand the offering to the UK and Spain in 2017. To date, 60 educators have graduated during its first two years of operation. The program consists of four modules:

1. Leading Your Own Learning:

The first module focuses on the personal growth of the leader, including the development of strategies for reflective practice and a deep understanding of different leadership theories, models, and tools.

2. Leading Team Learning:

The second module focuses on developing the leader's ability to lead others, with a particular interest in building highly collaborative, learning-focused teams

3. Leading Innovation and Improvement:

The third module focuses on developing the capacity of the leader to lead change, innovation, and improvement, including the skillful use of systems thinking for planning, action, and reflection.

4. Professional Project:

The final module supports the integration and application of key learning from the program in professional practice. It is centred on the leadership of a work-based project designed to apply a systematic approach to an issue of practice or an area of innovation.

Analysis and findings

As the program looks towards further expansion, it was timely to examine the impact it has had upon leadership development, teacher collaboration, student learning, and network development. To this end we gathered data from a range of sources, including assignments, online discussion, surveys, interviews, and anecdotal observations. The key insights that emerged from the study were also shared and discussed with graduates as a way of extending the analysis.

Leadership development

The research has shown that the program has helped participants to develop a clearly articulated knowledge base of theory, methods, and tools for leadership, including a refined ability to critically reflect upon the strengths and weaknesses of their current practice. The program was also found to support leaders in embracing the dynamic change and complexity that can distinguish international education, with many participants reporting that their study had helped them to accept uncertainty and deal with tolerable levels of tension as a part of their leadership practice. In this regard, the program was seen as particularly important in providing leaders with access to support and knowledge networks that helped them overcome the anxiety commonly associated with deep learning and the transformation of practice (Schein, 1995).

Teacher collaboration

Findings from the study revealed that participants developed their ability to work systematically with others through the identification and analysis of challenges associated with tackling an area for innovation or improvement at their school. To support this work they adopted a variety of innovative approaches to improve the quality of collaboration in their respective teams, including the use of protocols, critical friends, rubrics, and surveys to inform the development of effective teamwork. In an important finding, participants commonly saw their interactions with other leaders in the program as helping to create 'practice fields' in which they felt safe to experiment, make mistakes, and share learning (Schein, 1995). In turn, many of these leaders worked to create similar types of learning

environments for their teams as a result of their program experiences.

Student learning

Critically, research has shown that the program has helped participants to have a positive impact on student outcomes in areas such as problem solving, critical thinking, communication, and cultural literacy. Some of this innovation has been driven through discipline-based approaches, with an increased emphasis on creative and critical thinking. For example, one project saw two program participants co-lead a cross-level team of primary teachers in exploring the use of digital provocations to improve differentiation in Mathematics. Their study combined the integration of new technology, in the form of iPads, with Sullivan's (2011) challenging task method to improve students' problem solving and reasoning skills. Other school based innovation has been focused on targeted interventions to address issues related to student welfare. For example, a number of participants led their teams through the investigation of strategies for improving the wellbeing of secondary students from non-English speaking backgrounds. Their studies saw the development of inquiry based units that explored different perspectives regarding migration and cultural collision, with an emphasis on students' personal experiences helping to promote outcomes related to intercultural understanding. The third main pathway for innovation has focused on the application of specific pedagogical approaches to different teaching contexts. For example, a small group of participants has examined the impact of formative assessment on teacher practice and student learning within their faculty or year level groups. Their studies drew from the literature on formative assessment (Wiliam, 2011) and personalised learning (West-Burnham & Coates, 2005) to help student take on greater ownership and responsibility for their work.

Network development

The study demonstrated that the program worked to support leaders to critically evaluate the application of their skills, knowledge, and understanding to leading change initiatives, and share their insights with others. In particular, the professional projects were found to help to drive innovation in individual schools, while at the same time producing valuable case studies that were examined in terms of how the findings might be

transferred and adapted to different contexts and settings. Through the face-to-face and online forums, the participants routinely provided feedback and support for each other's work, with more sophisticated collaboration evident in cases where shared challenges regarding student learning were identified. Interestingly, one of the most significant outcomes from the program to date has been the development of a critical mass of current and emerging leaders with a shared vision, shared language, and theoretical framework for leading innovation across the region.

Conclusions and recommendations

The research examined in this paper reveals the potential for targeted programs that incorporate the work based application of organisational learning theory to support innovation, teacher collaboration, school improvement, and network development. In particular, systems thinking and system leadership were seen to be promoted through shared engagement with a common language and theoretical framework for leading innovation, along with the nurturing of local and regional learning environments that supported experimentation, reflection, and collaboration. While there are limitations in the relatively small scale of the study, the findings highlight the power of developing programs that align the learning of students, teachers, and school administrators, with the goal of developing a system-wide culture of inquiry and learning. From the findings of this study it is recommend that more research be undertaken to examine the interactions and dynamics that support the development of system leaders, including a specific interest in examining the impact of their evolving practice over time. As part of our aspiration to build systems that will support future-focused education, we need to embrace systems thinking as the key to understanding the interdependent nature of the learning for students, teachers, and leaders that will help bring this vision into being.

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Developing a community of VET professionals

TERRY O'HANLON-ROSE
Position
Institution
Location

Biography

Terry O'Hanlon-Rose was awarded a FACE in 2008 for his work in Vocational Education and Training (VET). As an educational administrator, Terry has been committed to providing standards of excellence throughout his educational career, spanning over 30 years. Terry established the Australian Technical College North Brisbane which fast became the leading Australian Technical College in Australia. This college presented at the INAP (Innovative Apprenticeships Network) Conference in September 2009 in Turin, Italy after Terry's research work was successfully reviewed by a panel of Peer Researchers. His research into 'Boundary crossing: Transitioning students to work through authentic employment-based training' is based around Terry's practitioner-based research.

Abstract

Using the work of Lave and Wenger (1991), this paper explores a set of proposed predictable success factors for the effective establishment and ongoing success of a VET Practitioner Association. Linking the effectiveness of systems, compliance and teaching and Assessment Frameworks to Competency Standards, Effective Continuing Professional Development, Leadership and Innovation the paper provides an analysis of the professional development engagement VET Practitioner Community and the isolation and marginalisation experienced in this area. In conclusion, the paper develops an effective structural model of a VET Practitioner Professional Association as an emerging and sustainable Community of Practice as VET professionals and proposes a governance and infrastructure model to support the sustainable and continuing Professional Association of VET Practitioners in Australia.

Background

The use of Communities of Practice in professional learning communities is not a new phenomenon. Communities of Practice are groups of people who informally come together and present as a collective of like-minded individuals with a range of aims and objectives. Loosely, Communities of Practice are applied to many collective groups to drive strategy, generate new ideas, promote the spread of best-practice and develop professional skills to name just a few. As applied social learning theory, a community of practice is a group of people informally bound by a shared practice related to a set of problems or agendas (Wenger, 1999, p. 4). According to Simons and Bolhuis (2004), Communities of Practice provide homes for identities (p. 18). Wegner and Synder (2000), categorise a Community of Practice's purpose 'to develop members' capability to build and exchange

knowledge held together by passion, commitment and identification of the group's expertise', (p. 142). Essentially, the Community of Practice is such that the group has a common identity, with an agenda to share and improve practice.

Moving from a novice to an expert in an area of work requires some degree of participation in a community. This participation can be seen as the process of Legitimate Peripheral Participation. Lave & Wenger (1991), proposed that 'Legitimate Peripheral Participation is a conceptual bridge inherent in the production of changing communities of practice' (p. 55). Jarmillo, 1996, argued that humans are active in making sense of their world—that is, humans learn through their interpretative actions and experiences in social environments. The VET professional association provides an environment of situated learning (Lave & Wenger, 1991) that provides legitimate

participation from novice to expert and provides identity to a community that has been challenged, disrupted and marginalised.

Many challenges have occurred in the VET space. The opening of the VET market to competition has stimulated the emergence of new types of VET practitioners in this newly created market. Training practitioners in private colleges, private consultants, school VET teachers and staff in ACE colleges now claim a position in the VET sector alongside TAFE teachers who, until recently, were the predominant group to claim vocational education and training as their area of professional practice. The competitive VET market has invoked new roles for VET practitioners, which are not only additional to the traditional teaching role but are also substantially different in terms of focus purpose and practice (Chappell & Johnston, 2003). Collectively, the VET practitioner community is diverse, far-reaching and fragmented, yet is grouped collectively as the body held accountable for the quality of assessment and training.

Chappell (2004) suggests that as a result of these changes all educational sectors are experiencing a greater focus on work and workplaces as significant sites for learning; and in order to respond to these shifts, new understandings of pedagogy have emerged in which VET teaching and learning practices are seen as needing to become more learner-centred, work-centred and attribute-focused. This places much greater responsibility on an increasingly diverse group of practitioners.

Demands on the VET Practitioner

There are varied demands on VET practitioners. The VET environment in which practitioners participate requires practitioners to have a sophisticated appreciation of all of the pedagogical choices that are not only available to them but which are also consistent with the context, clients and learning sites that make up the arena in which they work. In short the successful implementation of VET programs relies on learning specialists who have expertise and a pedagogical orientation that they are able to deploy to meet the increasingly diverse requirements of clients. Consequently, VET teachers and trainers must be able to recognise and adapt their teaching and learning practices in order to respond to these differences (Chappell,2014).

Nevertheless, the diverse nature of the VET practitioner, mixed with minimum education and training qualifications at the Certificate IV level, does not provide the kind of professional learning skills required in the contemporary world of workforce development. Arguably perhaps the greatest challenge facing the VET sector is to develop a workforce that can implement the pedagogical changes required in the context of contemporary vocational learning (ibid).

The growing concerns about inconsistencies in the quality of delivery and assessment of VET continues to challenge the value of the Australian vocational qualifications. VETnetwork Australia argues that the establishment of a nationally representative association of VET practitioners with a focus on aspirational standards to attract, retain and recognise highly skilled professionals will lead to improved quality education and training outcomes (Stevens & Campbell, 2016). Louis and Marks (1998) concluded in their study of twenty-four colleges that a professional community among teachers proved to be associated with authentic pedagogy and achievement of students.

Success Factors of Professional Organisations

An examination of success factors of Professional Organisations has highlighted some commonalities that are present in successful organisations. de Chernatony & Segal-Horn (2003) conducted interviews with 28 leading-edge consultants on brand value. The study found that success is more likely when there is belief in brand values. Through shared values, there is a greater likelihood of commitment, loyalty, clearer brand understanding, and importantly, consistent brand delivery across all stakeholders. By viewing these factors within a systems perspective, the result is greater services brand consistency and loyalty (p. 1095).

Operating a professional service firm is very different from running a product-based business. Infrastructures, governance, talent management, compensation, and profitability vary significantly from traditional corporate environments (Broderick, 2010). Common traits found in the study of the world's most successful professional service organisations included:

- Passion of leaders and staff
- Everything is driven by Client Service
- Respect for investment in people

- Operation involves fluid and flexible teams
- Organizational structures are simple
- Everyone serves the cause, mission and values of the organisation
- They 'stick to their knitting' – diversification is not important but the cause to which the organisation aspires is the ultimate priority
- It's about the work, not profit. Profit is not the driver, although attention is paid to sustainability
- Change is slow, intentional and planned (Broderick, 2010)

Conlon (2014) outlines the benefits of the establishment of a national professional VET association as:

- Continuing professional development
- Career services, such as a listing of jobs available
- Technical information and resources available to members
- Networking events and access to Communities of Practice
- Shared discourse on professional practice
- Increasing the profile of the profession

- International mobility and recognition
- Regular newsletters and broadcasts
- Annual conferences at discounted rates
- Advocacy on behalf of the individual to government and industry
- Access to resources on members only websites
- Access to Professional Journals
- Certification and/or accreditation
- Discounted member benefits such as flights, cars etc.

As such, the development of a VET professional association can be viewed as performing a number of roles in the areas of Professionalism, Workforce Development, Advocacy and Accreditation. Figure 1 demonstrates how these are linked to form a cohesive national VET Professional Association. Through a professionalism agenda, a national VET association would build identity and outline qualities of being a VET professional. Similarly, through strategies to build innovative workplace cultures, the VET workforce is strengthened. It is important that a strong, consistent voice is heard from the VET professionals and in turn would build confidence in the sector.

Figure 1   VET Professional Association Roles

Putting it together – The Framework of VET Practitioner Capabilities

The VET Professional Association would focus on the practitioner capabilities and bring structure and rigor to the sector. *'At the front line of excellence in teaching and learning outcomes is a professional and well supported VET workforce'* (Skills Australia, 2011. p. 91)

There is great emphasis in the Skills Australia report (2011) on continuous professional development (CPD) for maintaining industry currency and creating different levels of expertise and specialization for VET practitioners. The report also identified the need for improving the quality of practice in the area of teaching and assessment that according to the report requires investment in a VET workforce development strategy.

The need for regular as well as specialised CPD to ensure the VET sector and its staff remain up-to-date and current in pedagogy practice, assessment and specialised industry skills is consistently discussed in many of the research and policy papers developed over the past few years. CPD is seen as the cornerstone for maintaining the professional status of associations and its members (Skills Australia 2011).

Wheelahan et al (2011), suggest that a framework was developed for the quality of VET teaching and training in which a national VET professional body is considered. The recommended approach in this report identified the need to develop an association for VET Professionals but concluded that the most effective approach would be to stage the development of an association.

A VET Professional Association represents a way to bring the professional trainer's voice into consultation processes and policy and quality debates. The trainer, crucially, stands at the intersection of government policy implementation and the impact on student outcomes yet there is currently no direct ability for a professional voice to provide advocacy into these training and assessment practices and directions.

A National VET Professional Association has the potential to add value to individuals, RTOs and the broader VET sector:

Individuals: by supporting personal and professional growth through continuing professional development (CPD); by providing networking opportunities for likeminded professional and by promoting and providing examples of best professional practice and a VET identity

RTOs: by improving VET professional capability by identifying and supporting the changing roles and demands on the RTO workforce in providing high-end, adaptive skills necessary to meet emerging technology, information and skill demands of employers

VET Sector: by providing a strong voice to advocate for the sector and contribute to state and national policy debates; by consulting widely on training and assessment policy and quality matters throughout Australia and by promoting the sector's diversity as a strength.

Enacting this approach requires a strategic planning process in the development of the Professional Association as demonstrated through the following diagram (Figure 2).

These roles and functions are not always discrete but it is important that a new association is clear about its scope. It is not envisaged, for example, that either the workforce development or advocacy function would have an industrial relations or employment conditions focus. This is considered a role for employers, organisations themselves and unions and therefore, outside scope. Similarly, while a professional association usually has a focus on the professional development of its members, without an overarching understanding of the shape, needs and anticipated directions of a workforce, an association's PD programs and strategies risk being ineffective and inefficient (Schmidt, 2014).

Special clarity is also needed around the concept of accreditation. In this context, the membership of a Professional Association is not about registration or the compulsory licensing of professionals that applies to some occupations. Nor should it be confused with the regulation and endorsement processes of national training package qualifications and accredited courses, although a VET professional association would wish to be invited to be a stakeholder in the development process. Wheelahan and Moodie (2011), for example, argue for the development of teaching standards which could then be tied to a VET program accreditation function as a later part of a staged process for a professional VET body.
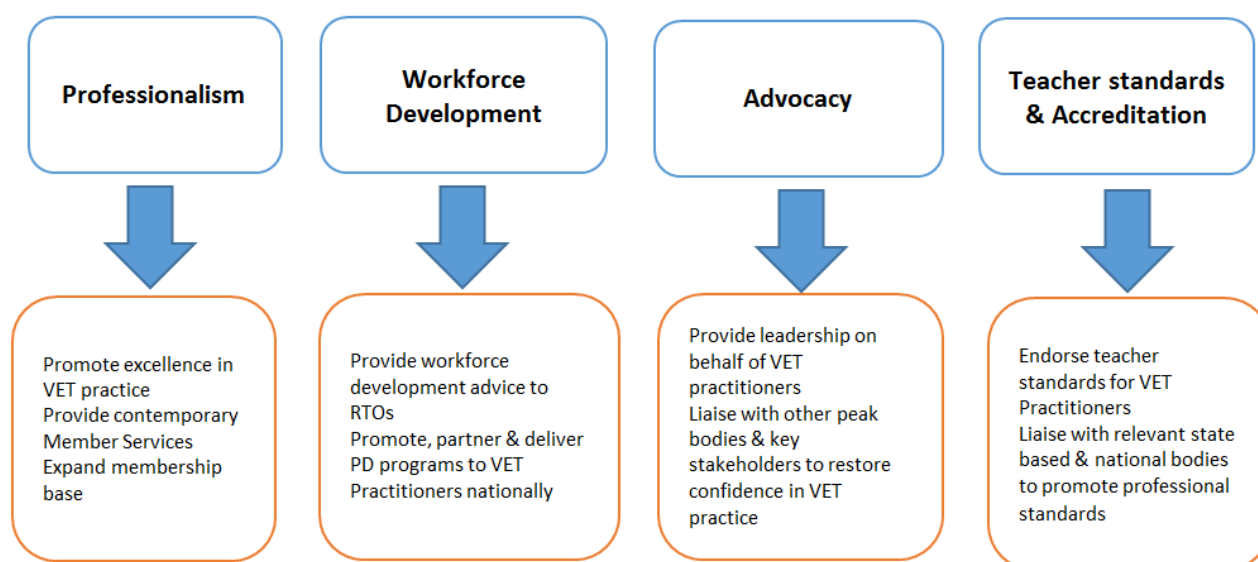
Figure 2   Strategic Actions arising from the main focus of a VET Professional Association

A National Organisation of VET Professionals – What would it look like?

A national association of VET professionals will have to establish the infrastructure required to support these roles. Each role needs to be supported by a range of activities, possibly implemented in a staged approach and which would require resources to support the activities.

Systems and enablers that a professional association might require include:

- A knowledge and information hub e.g. a website possibly providing, blogs, wikis, social media etc. with links to industry professional associations for professional knowledge-sharing
- A communication strategy e.g. e-newsletter, journal, social media, discussion forums etc.
- An ePortfolio tool to record evidence of continuing professional development (CPD) if a CPD scheme was established. EPortfolios can be used as an evidence base for self-assessment and certification and can be shared with prospective employers and RTO managers for performance conversations and quality review purposes
- A continuing professional education program e.g. mentoring, communities of practice, organised events including networking, conference and guest speakers

and links to other quality programs offered by external providers.

(Schmidt, 2014)

Whilst the establishment of a new organisation is an option, the working group considered a number of existing professional organisations. It revealed that there were a number of professional development organisations in the Australian landscape. There was, however, one organisation that met many of the initial characteristics and provides an avenue to kick-start the Professional VET Association in Australia.

VETnetwork Australia (VA) has a strong 20-year history as a member based organisation providing professional support and advocacy to VET practitioners working in schools, training providers and industry settings. With strong partnerships across governments, industry partners, national VET peak bodies, schools and related organisations VA is well placed to leverage these partnerships to promote, manage and expand the VET Professional Association. VA is a well governed and structured organisation that is independent, financially viable and sustainable with a clear vision to improve VET practice so as to restore trust in the quality teaching & assessment of the Australian VET sector. Figure 3 demonstrates the factors that provide an immediate vehicle to the establishment of a National VET professional association.
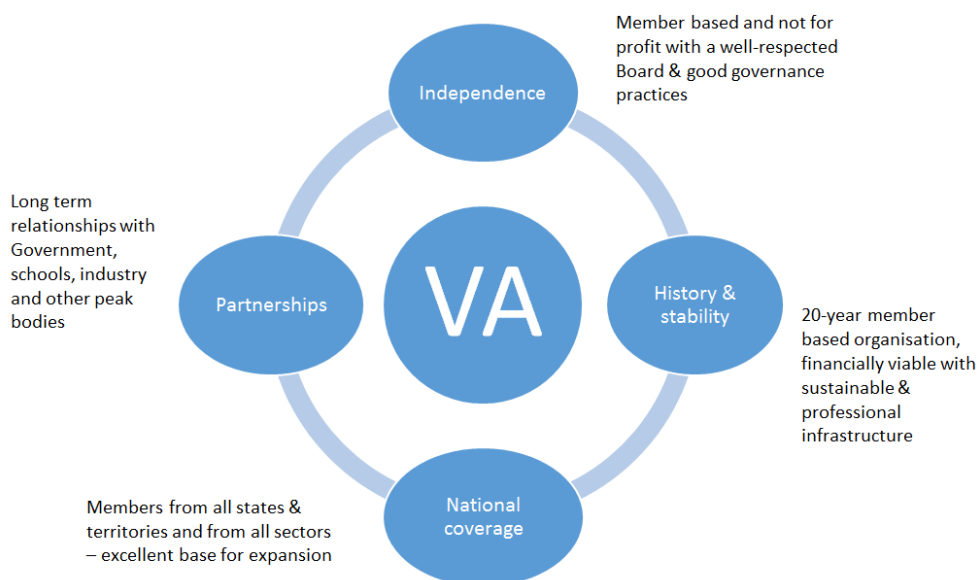
Figure 3   The strengths of VETnetwork Australia as the National body for VET Professionals

Conclusion

The path to establishing a National VET Professional Association must allow a credible Value Proposition for its members. Such an association would bring professionalism; promote excellence in VET practice; provide contemporary Member Services such as forums, blogs, ePortfolios; provide an avenue for RTOs to access readily available workforce development opportunities; provide leadership on behalf of VET practitioners; and endorse teacher standards for VET practitioners

The establishment of a Professional VET association in Australia is not a new concept and considerable research and debate has taken place over the past decade. With the increasing public, government and professional scrutiny of VET delivery, it is now imperative to establish a peak body for practitioners. Stevens and Campbell (2016) conclude that the implementation of a national peak body representing and advocating on behalf of VET practitioners will provide the following benefits:

- Restoration of confidence in training and assessment outcomes and the integrity of vocational qualifications
- Bring national consistency to VET educator standards
- Provide national identity for the VET workforce
- Provide an avenue to advocate for practitioners and the sector

It is clearly time to act; to make this happen and develop a credible, viable, sustainable and vibrant national organisation for VET professionals.

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Collaborative Learning Design in the Middle Years: Aspiring to a transformative approach to teaching and learning

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Biography

Sarah Quinn is a PhD candidate under the supervision of Dr Barbara Spears and Dr Susanne Owen at the University of South Australia. She completed a Bachelor of Education with First Class Honours in 2012, receiving the Jane Harper Honours Research Prize. From 2012 to 2014, she was involved in collaborative action research projects with a number of schools in South Australia through the DECD Innovative Learning Environments initiative. Sarah has just finished her PhD thesis. Her research interests include; curriculum and pedagogy, participatory design, learning design, student engagement, student voice and participation, adolescence, transformative education and teacher's professional identity.

Abstract

Transformational reform in the Middle Years has been described as an 'unfinished' research area. The growing climate of standardised curriculum, pedagogy, and assessment has revived the need to explore alternative approaches to learning in the Middle Years. This presentation reports on a critically pragmatic case study and collaborative inquiry in a South Australian middle school. Using a mixed methodology, the researcher, four educators, and their students explored the potential for generating change at the classroom level by co-constructing curriculum, pedagogy, and assessment through a collaborative learning design (CLD) process.

The process of CLD was formed through the amalgamation of learning design and participatory design research methods. Data were collected through an online survey, document analysis, interviews, co-design workshops, observations, and critical reflections. The findings illustrate the complexities and tensions that arose as participants engaged in a CLD process, as well as practical examples at work in the classroom. The implications indicate that deliberate attention to and design of novel, participatory curricular structures, emergent pedagogical interactions, and communicative practices at the institutional, interpersonal, and discursive levels together enable educators and students to create new 'ways of knowing, doing, and being' a teacher and learner in a democratic learning community.

Introduction

A number of scholars have suggested that the Middle Years of schooling could be a site for transformative education (Groundwater-Smith, Mitchell, & Mockler, 2007; Smyth & McInerney, 2007; Prosser, Lucas, & Reid, 2010). Research has shown that in the Middle Years, the design of curriculum, pedagogy, and assessment should focus on the academic and developmental needs of students through the contextual, social construction of knowledge, skills, and capabilities that are meaningful for students and productively assessed (Lingard, 2007; Pendergast & Bahr, 2010). But the possibilities for implementing such an approach, have been contradicted by recent reforms that reflect a 'top down' trend and 'policy borrowing' from other countries within the OECD (Lingard & McGregor, 2014; Reid, 2011).

The reforms and institutional measures put in place to move to an Australian Curriculum were intended to provide national alignment in content,

minimise curriculum variation, and allow accountability and transparency for the wider community (Atweh & Singh, 2011; Ditchburn, 2012). But they are problematic for educators, who now face perceived restrictions on the space for creativity, judgement, and local decision-making in regard to accountability and curriculum design (Brennan, 2011; Ditchburn, 2012; Mockler & Groundwater-Smith, 2015). Researchers have also observed an increase in the technical aspects of pedagogy, and regression towards transmission-based, teacher-centred approaches (Lingard, 2007; Mills & McGregor, 2016). For students, the opportunity to participate in and make decisions about what they will learn and how they will learn can be limited (Skourdoumbis, 2015).

However, many schools and educators in Australia and around the world have become increasingly engaged in the inspiring, exciting side of educational change from the 'ground up', through school transformation and innovation, confidently designing, trialling, and testing new practices (OECD, 2013, 2015; Robinson & Aronica, 2015; Wrigley, Lingard, & Thomson, 2012). Given the current educational climate, it is important for educators to research these practices as one way of speaking back to neoliberal educational policy (Cochran-Smith & Lytle, 2009; Somekh & Zeichner, 2009; Stenhouse, 1975).

This paper reports on participatory research in which the researcher, four Middle Years educators, and their students aspired to transform teaching and learning in the classroom in an environment of increased standardisation and accountability. It is focused on educational change at the classroom level, through a collaborative, participatory inquiry and the fields of design. Two forms of design research provide the foundations of this paper, in conjunction with practical understandings of policy, established educational practices, and learning theories. The first is the field of learning design; the second, participatory design (PD), also known as collaborative design, or co-design (DECD, 2012; Hagen et al., 2012; Wiggins & McTighe, 2011).

Learning Design and Participatory Design

Learning design is a teaching methodology that can assist educators in developing creative planning practices (Kalantzis & Cope, 2011). In South Australia (SA), the context of this research, there is a strong policy and practical base for applying a learning design process. The Education Department has mandated that educators engage with this approach when planning curriculum, pedagogy, and assessment (DECD, 2012), and encourages educators to plan units of work that align with and are accountable to curriculum policy, incorporate engaging pedagogies, and are responsive to student needs (DECD, 2012; Wiggins & McTighe, 2011). Figure 1 shows the learning design process currently being enacted by educators in the SA context.
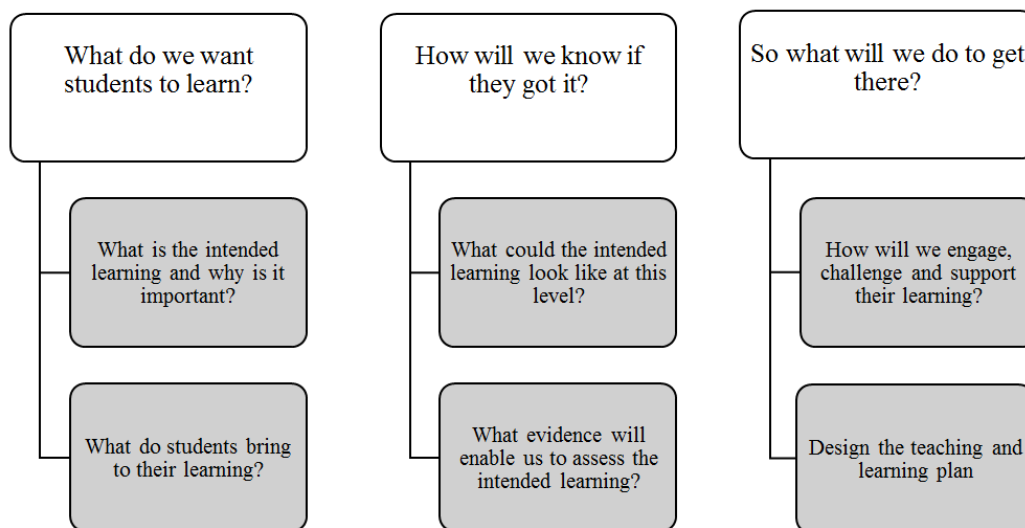

Figure 1   DECD Learning Design Map (DECD, 2012)

However, the possibilities that could be attained for students through this teaching methodology have not yet been realised. While the uptake of a learning-design process has been successful from a policy perspective, there is scope to extend this practice further through collaboration with students to co-design curriculum, pedagogy, and assessment. In order to generate new knowledge in this area, this study drew on a second form of design—the process and methods of participatory design (PD) (shown in Figure 2). The process and methods of PD are intended to involve 'end users' in a collaborative design process to develop a better understanding of their lived experiences and how they see and act in the world (Collin & Swist, 2016; Hagen et al., 2012; Sanders & Stappers, 2008).
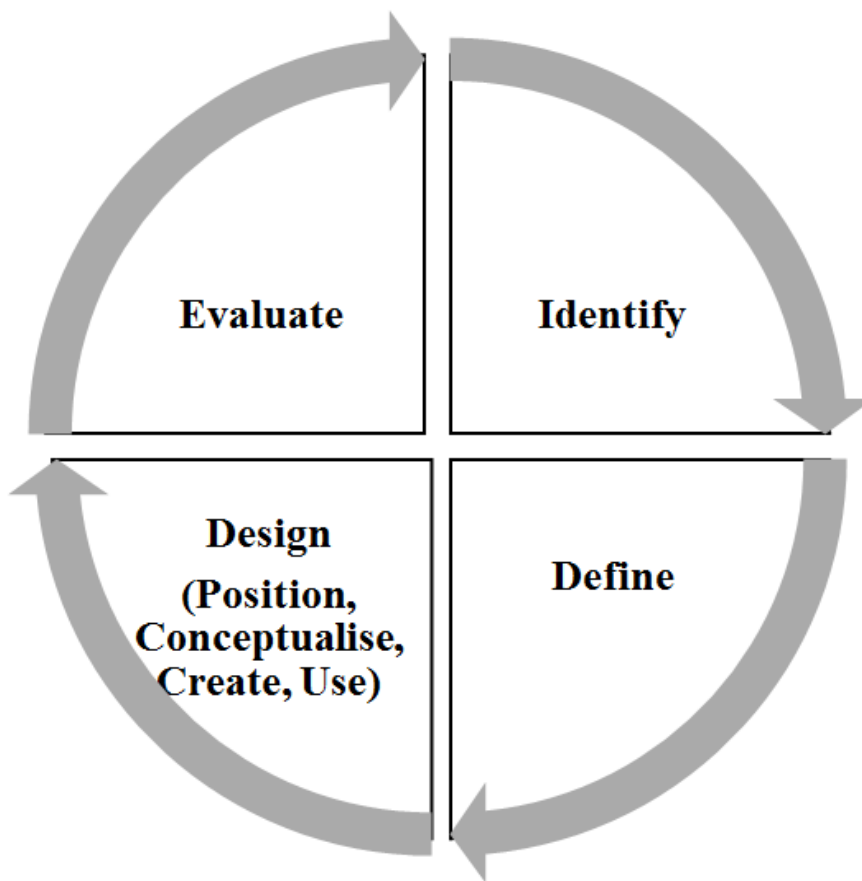

Figure 2   A framework for Participatory Design (adapted from Hagen et al., 2012)

This study was focused on the purposeful design of a democratic learning community—specifically, the social structures, interactions, and practices within that community—using the processes and methods of learning design and PD. This paper focuses on how these elements were configured across classrooms to create a CLD process, facilitating deep engagement and enhancing student learning outcomes (Fairclough, 2012; Gee, 2011; Lave & Wenger, 1991; Rogers & Mosley, Wetzel, 2013), and provides an overview of the theoretical and practical elements of CLD as they were constructed, implemented, and evaluated in context.

The Research Approach

The approach to this research was a critically pragmatic, mixed methodology featuring a case study, PD research methods, and elements of critical ethnography. A mixed methodology framed the investigation of the mixed elements underlying a complex social phenomenon—how learning happens in the classroom (Creswell & Tashakkori, 2007; Crotty, 1998). Four Middle-Years educators and the students in their classes (n= 84) from one secondary school site in metropolitan Adelaide, SA, consented to participate in this study.

An overview of the sequential mixed-methods research design is shown in Table 1. Each phase consisted of a unique focus intended to inform the future, emergent stages of the study. In phase one of the research, the focus was on the exploration of the case-study environment. In phase two, the focus was to establish collaborative conditions for the participants to work together in a participatory inquiry into the design of curriculum, pedagogy, and assessment. In phase three, the focus was to reflect critically on any changes made, to ascertain any effects on engagement, agency, autonomy, and learning outcomes (Cohen, Manion, & Morrison, 2013; Dewey, 1925, 1927; Habermas, 1979, 1984; Hagen et al., 2012).

Table 1 Emergent Design Conceptual Framework

Phase 1: Exploratory and Descriptive	Phase 2: Participatory and Generative	Phase 3: Critical and Reflexive
Level 1 – The School Context		
Principal Screening Interview		Case Study Report
Case Study Site (n = 1)		Presentations to Staff
Document Analysis		Research Diary
Level 2 – The Teacher Perspective of the School and Classroom Context		
Educator Interviews	Observation of Educators	Direct Classroom Observation
(n = 5)	Impromptu Interviews	Impromptu Interviews
	Design Artefacts	Critical Reflections
	Co-Design Workshops	
Level 3 – The Student Perspective of the School and Classroom Context		
Passive Participant Observation	Co-Design Workshops	Student Questionnaires (n = 22)
(Classroom n = 4)	Student Participants (n = 84)	Active Participant Observation
Student Survey (n = 51)	Design Artefacts	Focus Group Discussions
	Active Participant Observation	Impromptu Interviews
	Work samples	Work Samples
		Design Artefacts
Data Analysis		
Survey Data Analysis	Positive Discourse Analysis	Positive Discourse Analysis
Positive Discourse Analysis		

This study captured the participants' social and cultural processes for the construction of CLD and their institutional structures, interpersonal interactions, and discursive practices for meaning-making (Crotty, 1998; Fairclough, 2012; Gee, 2011; Palinscar, 1998). At the same time, a continual reflexive analysis reconstructed the underlying structures, interactions, practices, and outcomes that generated particular behaviours, meanings, and actions across their learning communities. A reconstructive analysis extrapolated the participatory curricular structures, emergent pedagogical interactions, and communicative design practices that *together* enabled educators and students to work collaboratively as learning designers (Dewey, 1927; Forester, 2012; Russell & Munby, 1992; Schön, 1983). These findings are presented below to provide an overview of CLD as a social process for teaching and learning.

Findings and Discussion

The visual depiction of CLD draws on the research findings across all classrooms. The institutional structures, interpersonal interactions, and communicative-design practices extrapolated from the reconstructive analysis are shown in Figure 3. The structures, interactions, and practices found to support CLD in the participating classrooms are discussed below.

Curriculum and Assessment as a Design Artefact

Co-designing curriculum content and assessment standards was perceived to be a challenge by participants at the onset of this research. Educators and students operate in an increasingly standardised environment with a demand for accountability and transparency. This was seen to work against possibilities for collaborative design with students. However, as the study progressed, a new form of planning was established in the process of CLD, drawing on the two forms of design. As a result, this study found that the

identifying, *defining*, and *representing* of curriculum content and assessment standards in a design artefact with contextual form and meaning, is a key social structure and common reference point supporting intellectual engagement and academic achievement (Cope & Kalantzis, 2015; DECD, 2012; Hagen et al., 2012; Wiggins & McTighe, 2011). Figure 4 shows an example of curriculum and assessment represented as a design artefact, affectionately named 'The Umbrellas':

 'The Umbrellas' acted as a participatory curricular structure, and combined with collaborative knowledge construction and meaning-making,

supported a multidimensional and broad view of knowledge, as well as students' intellectual engagement and development. The Umbrellas provided a means for educators to create their own contextual measure of accountability, one that covers both policy, standards, and student needs, interests and aspirations. It provided a foundation for policy, but enabled conditions for students to make decisions about *what* they learn and *how* they learn (Cope & Kalantzis, 2015; Herrenkohl & Mertl, 2010; Mockler & Groundwater-Smith, 2015). A student version of The Umbrella's is shown in Figure 5.
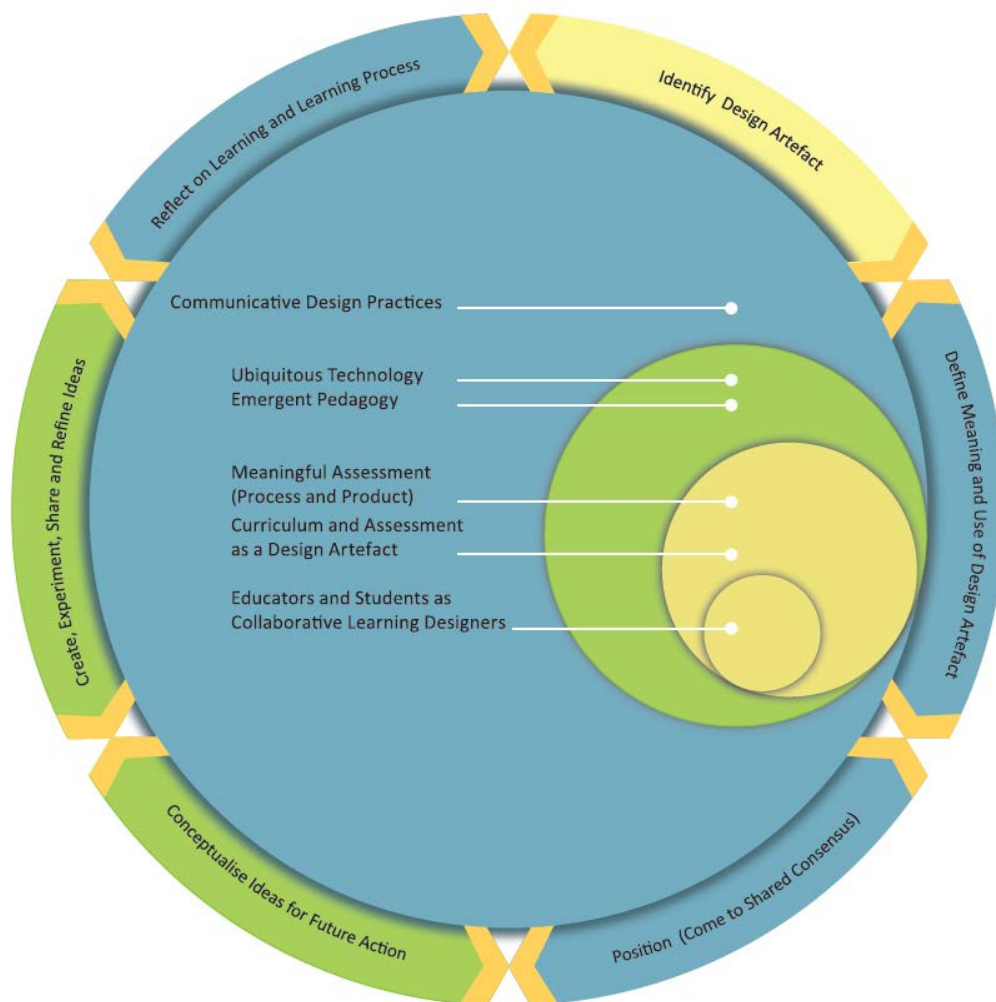

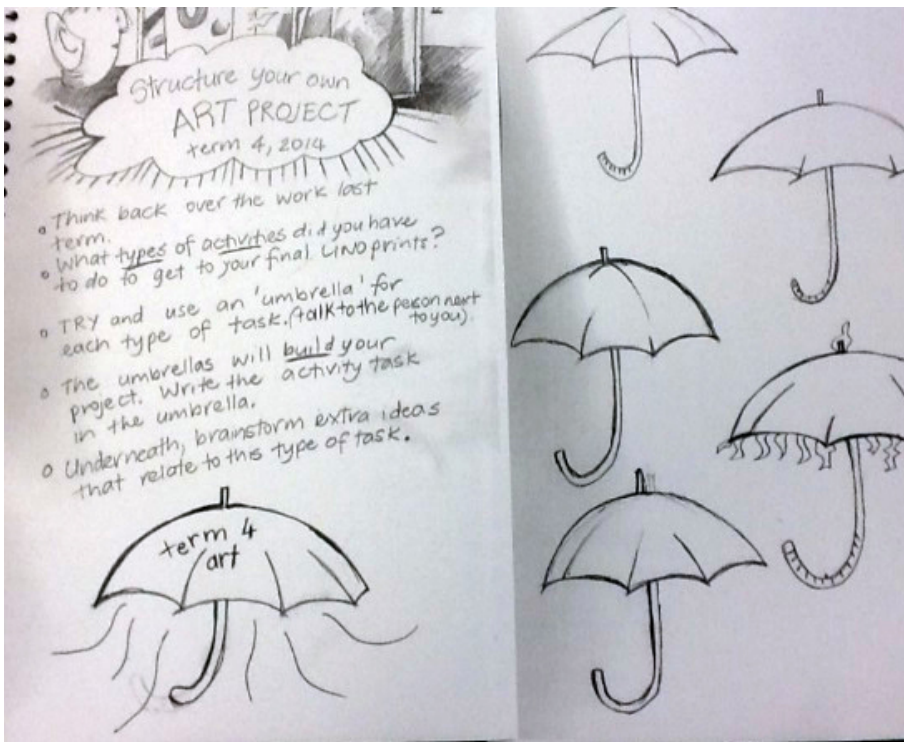**Figure 3   The Collaborative Learning Design Process (Quinn, 2016)**

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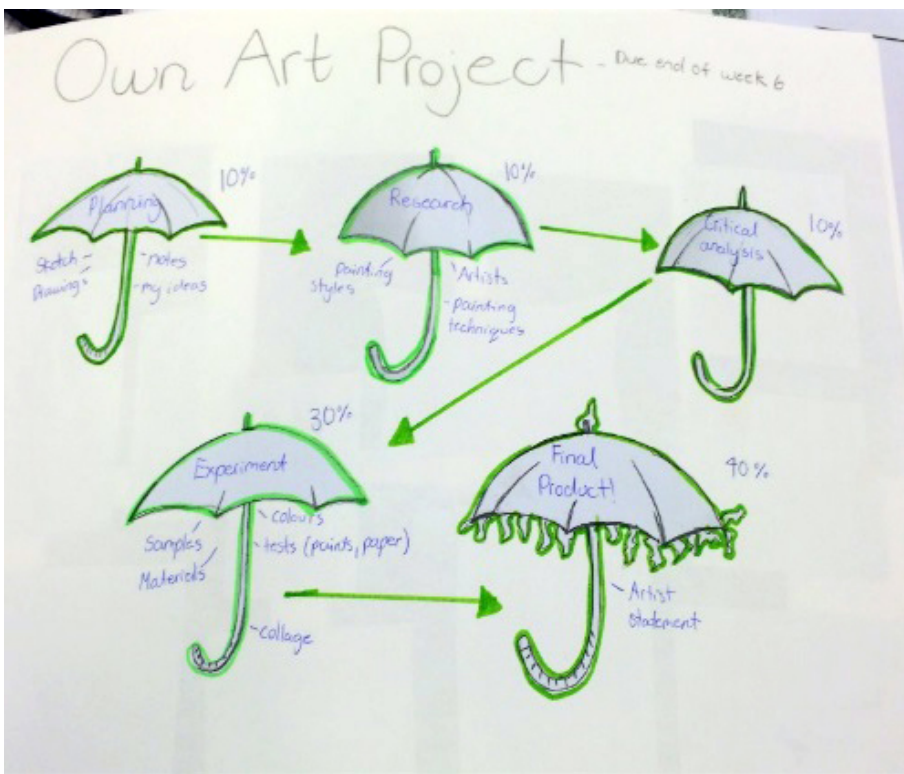**Figure 4   The Umbrellas (Teacher Version)**

Figure 5   The Umbrellas (Student Version)

Meaningful Assessment (Process and Product)

Observations of assessment structures in CLD incorporated and linked formative and summative assessment. Meaningful summative assessment products that allowed students to pursue a personal learning journey of value were found to be an important factor in students' engagement in both learning and the CLD process (Deakin Crick, 2012; Deakin Crick, Huang, Ahmed, & Goldspink,, 2015; Richardson, 2015). However, a difference was noted in the overall effectiveness of assessment structures. It was found that assessment evidence needed to be identified at the outset of the CLD through the design artefact (Hagen et al., 2012). Additionally, effective assessment combined continual monitoring of student learning processes throughout the CLD unit, as well as a final summative assessment product of value. In one of the participating classes, assessment structures incorporated a developmental portfolio and final product as shown in Figure 6. This combination and connection between formative and summative assessment structures was found to be effective for student outcomes (Wiliam, 2011).

Figure 6   **Meaningful Assessment (Process and Product)**

An Emergent Pedagogy and Ubiquitous Technology

Overwhelmingly, the voices of students in this study continually called for more pedagogical freedom, more opportunities to explore *how* to learn in new ways, both with technology and without. Students were also seeking more space to explore learning beyond the segmented nature of the school walls, and above all, more time: time to produce evidence of learning that was valuable and meaningful to them, to pursue and reach an outcome they could be proud of and not be rushed into by outside constraints beyond their control (Crowell & Reid-Marr, 2013; Deakin Crick, Goldspink & Foster, 2013; Osberg & Biesta, 2008).

A broad view of learning and an emergent pedagogical approach is one that is known to support student engagement, as well as intellectual and social development (Crowell & Reid-Marr, 2013; Dewey, 1927; Herrenkohl & Mertl, 2010; Vygotsky, 1978). This social and interactive approach is also desired by students in their Middle Years, and it is certainly preferable to a traditional pedagogy of transmission. Many educators outside of the early-childhood sector may hold the mistaken view that an emergent curriculum or pedagogy is an unstructured approach to teaching and learning. This was the view of most of the educator participants at the onset of this research. However, this study found that an emergent approach is necessarily both highly structured and unstructured. In CLD, an emergent pedagogy incorporated intentional and explicit teaching of new knowledge, skills, and capabilities, but also involved cultivating an interpersonal space where educators and students could *position* themselves to interact as co-designers in partnership, to collaboratively *conceptualise* and *create* novel ideas for *how* they learnt (Fielding, 2011; Hagen et al., 2012; Mockler & Groundwater-Smith, 2015).

Communicative Design Practices and Critical Reflection

Powerful, deep learning is a personally emotional and transformational journey; it is not technical, mechanical, or standardised. Communicative practices can contribute to possibilities for transformation. Communicative practices include: developing and sharing common reference points and social norms; participating in meaningful

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social relationships; the generation of discussion, debate, and contestation: and coming to a shared consensus for potential action (Fielding, 2011; Habermas, 1984). Thus communicative and democratic practices were essential to facilitate and foster student voice and participation in the CLD process and mediate the continual, iterative negotiation of knowledge, meaning, social norms, and relationships within the classroom (Fielding, 2011; Mockler & Groundwater-Smith, 2015).

This communicative co-partnership was found to support an affective, emotional connection to learning and to the learning community. It provided safe, secure, and trusting conditions for educators and students to design and create new ideas, to act on those ideas, and work collaboratively to bring them about (Mitra & Gross, 2009; Mitra & Serriere, 2012; Mockler & Groundwater Smith, 2015). Moreover, *reflecting* on this process together helped educators and students to realise the personal and emotional impact of these experiences (Schön, 1983; Russell & Munby, 1992).

Educators and Students as Collaborative Learning Designers

In order to maintain a CLD partnership, students must be at its heart, as shown in Figure 3. This is fundamentally brought about by having a positive, caring, and trusting relationship (Smyth, 2012). When intellectual inquiry was melded with collaboration, belonging, and care in a democratic learning community, power and control was often shared in the classroom (Deakin Crick et al., 2015; Lingard, 2007; Lingard & Keddie, 2013). There was reciprocity between educators and students. A high level of engagement and achievement in meaningful learning was valued (Hattie, 2012). Students responded to this by exercising their own agency, using the resources available to them to make informed, reasoned choices and decisions about their learning (Habermas, 1984; Herrenkohl & Mertl, 2010; Mockler & Groundwater-Smith, 2015). The ways that educators and students interacted with resources for knowledge construction and meaning-making, and with one another during the CLD process most often provided the most important avenues for resilient agency and transformative learning experiences (Deakin Crick et al., 2015).

Conclusion

Collaborative learning design is not a mechanical approach to the teaching and learning process, nor

is it a recipe (Lingard, 2007; Mockler & Groundwater-Smith, 2015). Examples of the social structures, interactions, and practices at the institutional, interpersonal, and discursive levels that contribute to the CLD process have been illustrated throughout this paper (Fairclough, 2012; Palinscar 1998). *Deliberate changes* must be made to *all three of these levels*, not just one or two, in order to impact on engagement and learning outcomes (Cope & Kalantzis, 2015; Hattie, 2012).

When educators communicate with students about their personal learning purposes, foster resilient agency, and reflect on the personal impact of learning outcomes through CLD, meaning and engagement can be found in the course of the learning process (Deakin Crick et al., 2015; Hagen et al., 2012; Mockler & Groundwater-Smith, 2015). This research has shown that CLD can also be an effective way for educators to aspire to and collaboratively design broad, multidimensional, transformative learning experiences.

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Creating the ideal classroom environment to ensure success for Indigenous students

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Biography

Tracy Woodroffe is a Northern Territory educator with over 20 years of teaching experience. She has taught in the Early Childhood, Primary, Secondary and Tertiary sectors; currently lecturing at CDU in the school of Indigenous Knowledges and Public Policy (SIKPP). Through her strong beliefs about professionalism and student-teacher relationships, Tracy has experienced many successes and worked hard at improving teacher practice. Tracy's pedagogical interests include catering for diversity, and the power of feedback. Since completing a Masters of Education, Tracy is now undertaking PhD study to increase her knowledge, skills and awareness needed to further improve the educational outcomes of Indigenous students.

Abstract

This paper presents an educational paradigm, which focuses attention on academic achievement for Indigenous students. The paradigm is the result of an educator's Indigenous perspective, curiosity as a PhD student, and over 20 years of practical experience, spanning all of the sectors: Early Childhood; Primary; Secondary and Tertiary. Educational corner stones, (Feedback, Subject Content Knowledge, and Relationship Building), are used in conjunction with Hattie's (2003) expert teacher traits to reconsider best practice as it applies to improving Indigenous educational outcomes. Although dated, further analysis of Hattie's expert teacher characteristics, and practical application within the framework of the outlined 'corner stones', can be used to connect Indigenous Knowledge (IK) with the westernised Australian education system. This reimagining highlights the importance of IK for effectively engaging Indigenous students in education. Karen Martin's (2003) definition of IK is a foundation publication, and provides the definition of IK for the purposes of this paper.

Indigenous education in Australia

Since 1788, Indigenous education has been characterised by exclusionary policies, practices, and low expectations. Over time, attitudes have changed to include Indigenous students and their families, (Cadzow, n.d.). While positive changes have been attempted at inclusive educational practice, the issue of equity and respect for cultural difference has been an area of slow development, (Ministerial Council on Education, Employment, Training and Youth Affairs, 2000b, cited in Partington, 2002). The dominant mode of education in Australia is a product of western epistemological beliefs, (Keddie, 2012). The assessment of Indigenous students occurs against these expectations. The lack of Indigenous representation in the education system is a hurdle which perpetuates the perceptions of comparatively low Indigenous educational outcomes, (Partington, 2002; Apple, 2014; Bishop, 2010). As a result, Indigenous education in Australia has been a concern for successive governments.

> *All Australian governments have recommitted to the Closing the Gap targets under the National Indigenous Reform Agreement between the Australian Government and state and territory governments. These targets include a focus on access to education; school attendance; improving reading, writing, and numeracy; and finishing school.*

(Indigenous Schooling, Department of Education and Training, 2016)

The educational outcomes of Indigenous Australians are inextricably linked to colonisation, (Brady, 1997). McWhinney & Marcos (2003, p 20) explain this further by stating that, 'education is

always programmatic, designed to produce a specific social outcome for the particular populations that it serves. Education is never politically neutral; it leads pupils to accept its assumptions about power, reality, morality, and the formulations of knowledge that the curriculum imbues'. In Australia, Western Knowledge (WK) shapes our education system, (Brady, 1997; Moreton-Robinson, 2006; Porsanger, 2004). Indigenous Knowledge (IK) is not represented in Australian education. This is shameful. IK is important to Indigenous people. It is central to identity and wellbeing, (Martin, 2003).

Indigenous Australians do not necessarily align with the formulations of the western style education system. In fact, there are distinct knowledge systems at play. This could be argued as the reason why some Indigenous students are not engaging with education. That is not to say that there is no common ground. 'Indigenous knowledge should be valued and utilised in the education system, in order to create an improved education system' (Woodroffe, 2016, p 17). The aim should be to achieve parity within the Australian education system.

To precipitate the journey to parity, there should be a practical starting point. In order to monitor and measure progress, the work done should be observable. Within our current western system, to improve the educational outcomes of students, teachers need to have a positive influence (Hattie, 2003). Teachers and classroom practice is an ideal starting point. The way to achieve positive influences, with Indigenous students, is a matter of IK. Indigenous people live and breathe IK. This is what should be seen at school. As explained by Martin (2009), 'it is our relationality that sustains us'. Purdie, Tripcony, Boulton-Lewis, Fanshaw & Gunstone, (2000) confirm that for Indigenous students to be positive about education they need to see Indigeneity within the school setting.

Hattie (2003) espouses that the greatest area of influence is through teacher feedback. The crux of the matter is whether the Indigenous students are receptive, in order for any feedback to be effective in the first place. This reinforces the importance of student-teacher relationships (Hughes & Chen, 2011; Hambre & Pianta, 2006), but does not go far enough in expressing the importance of relatedness for Indigenous students. Is this why many Australian Indigenous students have not

experienced success, and why Indigenous people may choose not to engage with the western education system?

An Indigenous understanding of relationships or relationality is an important part of IK. It forms the ontological beliefs of Indigenous people and understandings about 'being' (Martin, 2003). If a teacher is unaware of the Indigenous interpretation or expectation of a relationship, surely they are on the back foot when it comes to relating to and educating Indigenous students, (Bishop, Berryman, Wearmouth, Peter, & Clapham, 2012). It raises questions about the importance of including IK in pre-service teacher education.

Indigenous Knowledge as educational best practice

WK has been refined and compartmentalised to demarcation lines that clearly define what knowledge should be learnt in schools. This is the situation in Australia, where WK is taught and assessed. Barnhardt & Kawagley (2005) highlight the differences between WK and IK. WK is compartmentalised, individualistic, freely available, and assessment based. IK is holistic, communal, privileged, and practical.

There are different knowledge systems and expectations. Malin (1994) found distinct and identifiable cultural beliefs about good teaching. Although the research is dated, there is limited work in the field that indicates these definite cultural preferences. It is important to realise that Australian Indigenous people have different expectations of the teacher. Indigenous people also identify more readily with someone who displays the expected behaviours. Thus, Indigenous people relate more readily with Indigenous teachers. A main point of contention highlighted was the way that each teacher spoke to the students. The Indigenous teacher, as noted by the Indigenous parents, spoke to the students as if they were respected and equal, on the same level. The non-Indigenous teacher was perceived by Indigenous parents as speaking down to the students; being disrespectful.

If perceptions are understood, then action can be taken to determine either how to change perceptions, or how to adjust practice accordingly. Although there are differences in educational expectations, it is the similarities that can be seen as potential areas for improving educational

outcomes. Martin's (2003) definitions will help those familiar with western expectations to also understand the Indigenous equivalent.

1.   Building relationships: Ways of being
Western

Hattie (2003) reminds us that expert teachers, who create the optimal classroom climate, have a complex understanding of classroom situations, and have a high respect for their students. In Australia, this is achieved through a majority of non-Indigenous lenses. Behaviours of the teacher will be in line with western cultural norms because the majority of teachers in Australia are non-Indigenous. The non-Indigenous teacher may have very little idea or understanding about *being* as defined in IK. There would most likely be no thought or understanding at all of relationality, or relatedness. That is unless perhaps there has been some reference to educational theorists such as Piaget and Bruner, and constructivism or Vygotsky's social constructivism. In general, these approaches are about the human aspect of learning, and the social interactions that enable learning to happen. It is thought that much learning can be collaborative. (Mutekwe, 2014)

Indigenous

In explaining the being part of IK, Martin uses, the following key statements. They are philosophical and provide us with an understanding of scope. 'We are part of the world as much as it is part of us, existing within a network of relations amongst Entities that are reciprocal and occur in certain contexts,' (2003, p. 10).

Being and relatedness are most readily seen when Indigenous people meet each other, particularly for the first time. Conversations generally begin to determine family name, language group, and then wider connections. 'We immediately set about establishing identities, interests and connections to determine our relatedness,' (Martin, 2003, p. 11). This is an exercise in allocation of respect. 'In these circumstances we draw upon what we know and have been taught from our Elders and family members as proper forms of conduct. Through this, our Ways of Being shape our Ways of Doing,' (p. 11).

Some key concepts of *ways of being* are relatedness, reciprocity, making connections with prior knowledge, and demonstrating ethical conduct. Teachers should understand and utilise this to build and maintain effective student-teacher relationships with Indigenous students and families.

2.   Feedback: Ways of doing
Western

Expert teachers anticipate, plan and improve as required (Hattie, 2003). Expert teachers are context-focused and attuned to student needs and progress. They engage students in self-regulation, and provide appropriate challenging tasks and goals. These skills can be utilised when providing feedback. The importance of feedback is the part that it plays in the teaching and learning cycle. Timely feedback allows students to practise and improve. Therefore, it is very important for the student to receive effective feedback. Unfortunately, there are a number of variables to consider. Firstly, not all teachers are expert and secondly not all students are receptive to feedback. Teachers should remember that, 'to be effective it is important to develop rapport, mutual respect and trust between you and the learner,' (McKimm & Swanwick, 2010, p. 43).

Indigenous

According to Martin's (2003) assessment, *ways of doing* are a synthesis and an articulation of *ways of knowing* and *ways of being.* This description links closely with feedback. Feedback is about demonstrations of knowledge, skills and understandings. During the teaching and learning cycle, of which feedback is one part, students are learning new knowledge and making connections with prior learning. They synthesise. However, as already stated, the teacher's degree of deeper content knowledge (ways of knowing) and the strength of the teacher-student relationship (ways of being) will determine the degree to which feedback (ways of doing) is effective.

Assessment of individuals is a characteristic of WK. It highlights the competitive nature of the western education system. This is not necessarily an aspect of IK. *Ways of doing* express individual and group identities, and individual and group roles. Behaviour and actions are a matter of subsequent evolvement and growth in individual *ways of knowing* and *ways of being.* (Martin, 2003)

Some key concepts of *ways of doing* are synthesis, individual and group identity, and developmental learning. Non-Indigenous teachers should know how to help students make connections in their learning as part of feedback. Feedback should be

non-threatening. Learning opportunities need to include group activities. Learning should be scaffolded when required, and explained within a developmental framework that includes purpose.

3.   Deeper content knowledge: Ways of knowing

Western

Expert teachers understand teaching and learning in a more complex way. They are better decision-makers and know how to prioritise, are more automatic, and enhance surface and deep learning (Hattie, 2003). Technically Hattie did not list deeper content knowledge as part of the expert teacher distinguishing traits. However, it was included as a very important characteristic of both experienced and expert teachers. It should be mentioned, that knowing content well does not automatically mean that you know the best ways to impart this knowledge to students. It does mean though that you are able to explain the content in a number of ways including making connections to other knowledge and breaking the knowledge down to its component parts.

Indigenous

Non-Indigenous teachers should know that IK is more than just information, or facts, but is taught and learned in certain contexts, in certain ways, at certain times. It is therefore purposeful, only to the extent to which it is used. If it is not used, then it is not necessary. Martin (2003) explains further that IK is gender specific and no one person or entity knows all. Furthermore, knowledge exists within a network of relationships. 'Without this knowing we are unable to 'be', hence our Ways of Knowing inform our Ways of Being,' (Martin, 2003, p. 9).

Some key concepts of *ways of knowing* are conceptual, purposeful, connected, and necessary. For teachers to work effectively with their Indigenous students and for optimum learning to take place it would be wise to note these concepts and utilise them when teaching content knowledge. The teacher truly has to understand who the students are and how IK plays out in everyday life.

The diagram below is a visual representation of inclusive best practice. By sorting and making connections, further links become obvious until what is left is a guide to improving the educational outcomes of Indigenous students. The diagram reveals links and the important connections between the traditional corner stones. These in-depth understandings help to complete the 'best practice' puzzle.
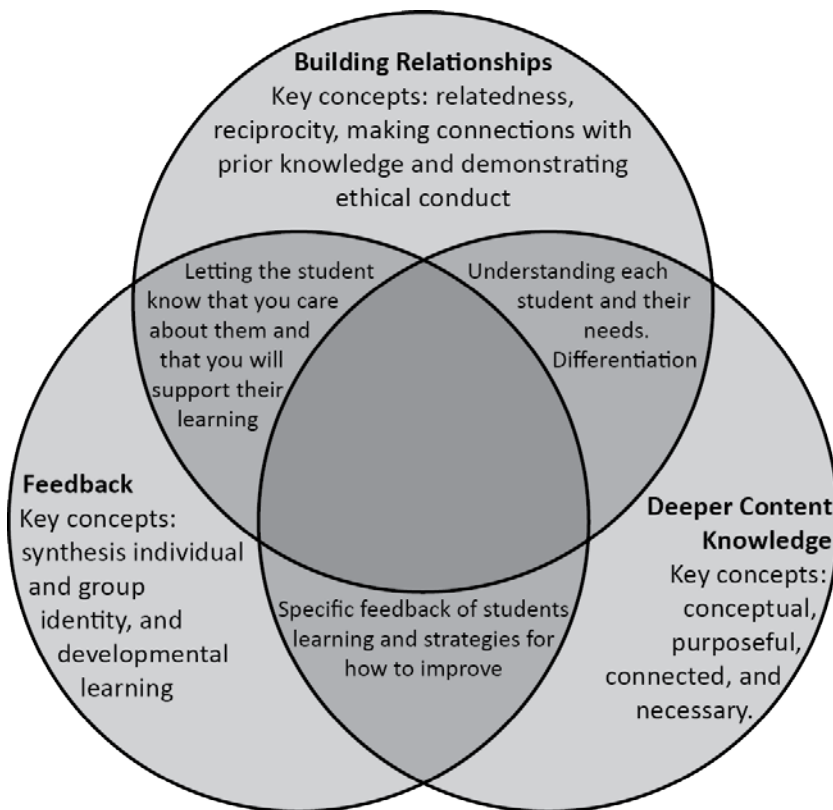

Figure 1   Improving educational outcomes by including Indigenous knowledge

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About the diagram

The goal is to improve the educational outcomes for Indigenous students. Teachers can achieve this by being positive influences on student achievement. This central ideal is supported by the outer layers; the mechanisms for change that guide practice about how to achieve the goal.

The second layer of the diagram, working from the centre out, is the overlapping sections. These sections portray the complexities of effective teaching. They also help to sharpen our focus. For example, 'Feedback' and 'Subject content knowledge' separately and in isolation are not sufficient. We must understand how they connect to ensure effective practice.

The outer areas to the diagram provide us with the links to IK concepts. Expert teachers are those who have positive influence on student academic achievement. As we build our knowledge and experience in teaching, we are striving to improve our skills and master the art. This will not be achieved until a teacher can cater for the learning of every student in his or her class. The paradigm represented in the diagram will support teachers in their journey to ensure academic success for Indigenous students.

Conclusion

Ensuring success for Indigenous students begins with creating the ideal classroom environment. This is totally within the sphere of influence of the teacher. All teachers should know the importance of cultural expectations, and the potential areas of impact for academic achievement. If teachers are able to successfully transverse the bridge between knowledge systems, they will be able to better understand the expectations of Indigenous students and their families.

Relationships with students and the wider community are very important. Nakata's work (1998, p. 23, cited in Andersen 2011, p. 100) supports the need for non-Indigenous and Indigenous people to work together to improve educational outcomes by stating, that Indigenous people have specific understandings and perspectives about Indigenous issues. Therefore, Indigenous people must be involved in improving Indigenous educational outcomes through better representation of IK within the Australian education system. This is how to achieve parity.

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Reflections from Practitioners

What cultural world view will equip Aboriginal and Torres Strait Islander students with the capacity to meet the challenges and changes in today's society

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Biography

Theresa Ardler is a Gweagal Aboriginal woman of the Eora region, Sydney her mother's country. She grew up in her father's country the Yuin nation Booderee National Park, Jervis Bay, ACT. Theresa's working life has been in education. She has worked across all educational systems in Australia, from the Catholic Education Office, Sydney as Project Officer: Aboriginal Education K-12; St. Andrew's Cathedral School, Sydney as Head of Aboriginal Perspectives K-12; North Nowra Public School as a classroom teacher. Theresa's vision is to work towards educating school communities, teachers and students about the richness of Aboriginal culture within Australian society. As the future of Aboriginal education unfolds, Theresa seeks opportunities to work creatively and innovatively in cultural and school environments that can produce genuine and meaningful cultural dialogue.

Abstract

Education systems are responsible for equipping Aboriginal and Torres Strait Islander (ATSI) students with the knowledge, understanding, skills, and values that allow them to take advantage of opportunities in today's society with confidence. To provide high quality learning for all, Australia's educational systems must embrace and explicitly teach about an ATSI concept of culture. Through teachers connecting with Aboriginal countries and communities in their local areas they can gain an in-depth cultural understanding that learning is holistic and focused on connections and relationships to self, family, community, language, culture, educational settings, and the natural world.

The paper focuses on the way all educational systems need to connect and develop relationships with ATSI communities when utilising the Australian Curriculum and core units on ATSI histories and cultures. Thus, an Aboriginal worldview develops through these relationships and cultural knowledge.

Without this knowledge and understanding, the intention of the cross-curriculum perspective of ATSI histories and cultures in the Australian curriculum can never fully be embraced. We need to emphasise connection, celebration, and affirmation of ATSI students and their cultural well-being.

What cultural worldview will equip ATSI students with the capacity to meet the challenges and changes in today's society?

My paper explores ways for educational systems to connect and develop relationships with ATSI communities when addressing the Australian Curriculum and the core themes on ATSI histories and cultures. An Aboriginal worldview is developed through these relationships and cultural knowledge is enhanced. The following eight key aspects need to be understood and enacted to acquire this worldview and these perspectives.

Community Involvement: Process and Cultural Protocols
By acknowledging the special relationship that ATSI people have with their traditional lands and waters, as well as their unique history, and diverse

culture, customs, and circumstances we start to strengthen and embrace Aboriginal culture in the wider community.

Cultural protocols are ethical principles that guide behaviour in a particular situation. The protocols pave the way for improving working relationships between educational staff and their ATSI teachers and education officers. Cultural and intellectual property rights include the right for ATSI peoples to:

- own and control their cultural and intellectual property
- ensure that any means of protecting their cultural and intellectual property is based on the principle of self-determination
- be recognised as the primary guardians and interpreters of their culture and so regulate how stories and information is presented
- authorise or refuse the use of their cultural and intellectual property according to customary law
- maintain the secrecy of their cultural knowledge and other cultural practices
- be given full and proper attribution for sharing their cultural heritage
- control the recording of cultural customs and expressions in the particular language which may be intrinsic to cultural identity, knowledge, skill, and the teaching of culture

This represents an important step towards understanding, respecting, and representing an Aboriginal worldview, encouraging culturally appropriate working practices and valuing the cultural diversity that enriches and motivates by driving educational systems forward.

Strong Community Engagement – Working with Elders

Community engagement is essential for embedding Indigenous perspectives in schools.

This will

- form personal relationships based on trust
- empower community members especially Elders to engage with schools from their own perspectives
- create partnerships central to successfully developing and implementing 'embedding' strategies

- evaluate how well ATSI perspectives have been embedded in the school and through the education office
- keep up to date with current community needs and aspirations.

The following strategies may assist in the development and maintenance of strong community partnerships and engagement:

- knowing one's own community;
- understanding and acknowledging traditional owners and the historical context of the Country where one's school or office is based;
- assigning staff to develop, maintain and share a list of local, regional, state-wide and national (where relevant) ATSI community organisations;
- developing a process that allows all staff to contribute in providing regular updates
- including general lists on shared drives with a confidential filing systems for parents, families, and Elders
- implementing solutions that reflect the community's specific needs.

An important consideration concerns payment for Welcome to Country, guest speaker programs, artist-in-residence programs, and general curriculum engagement activities. An appropriate remuneration will depend on individual circumstances, the role or type of engagement, and the length of time.

ATSI parents and the community play a vital role in supporting successful learning outcomes for our children but may have had negative experiences in the past. In order to address these concerns it is important to consider the following current best practices that provide a model to support all partners in their quest to boost parent and community engagement in an educational setting.

Local Indigenous Community Focus

ATSI people are the custodians of their knowledge and culture. They have the right to be consulted when aspects of ATSI history and culture are being incorporated into the school curriculum. Building learning partnerships is a mutually beneficial process that gives credibility and integrity to the teaching of Aboriginal students and the National Curriculum content related to ATSI cultures and histories. Working together on meaningful projects builds confidence and

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capacity in Indigenous parents and other members of the local ATSI community.

This focus on local Indigenous community will help and encourage educators to recognise the value of including Indigenous people in their planning and teaching. Where applicable, Indigenous people should always be approached to provide this expertise.

Engagement with the Land, Nature, and the Outdoors

Look for opportunities to get students, teachers, and schools interested in engaging with the natural world, which includes natural features that add interest and stimulation to an Aboriginal education perspective. These outdoor cultural classroom spaces invite all to interact, be spontaneous, take risks, explore, discover, and connect with nature in a cultural context.

Allow students to touch and interact with the natural environment in their everyday play within their school environment. An outdoor cultural classroom will allow every student to embrace an Aboriginal Perspective through engaging in quality experiences and learning to be responsible for and respectful of all natural world environments.

Partnerships with National Park Indigenous Workers

Indigenous rangers who work on Country create meaningful employment, training, and career pathways for Indigenous people in land and sea management. An example is my home: the Wreck Bay Aboriginal Community, situated within the Booderee National Park, ACT.

The ranger program supports Indigenous people to combine traditional cultural knowledge with conservation training to protect and manage our land, sea, and culture.

Indigenous rangers develop partnerships with researchers and educators to share skills and knowledge. They engage with schools to provide secondary students with additional work experience in the Indigenous Rangers program. Students gain valuable vocational educational learning on country from Elders; learning about biodiversity in different eco-systems, the cultural heritage, and cultural customs that are specifically relevant to this national park.

There is no stronger relationship than that between us the traditional owners, and our land. Our ancestors, and our future generations are all a part of our country. There is no other place more culturally appropriate to embrace the passing down of cultural knowledge.

The Power of our Dreaming Stories

Aboriginal spirituality does not consider the Dreamtime as a time or a time past. The term, *Dreaming*, better expresses the timeless concept of moving from 'dream' to reality that in itself is an act of creation and the basis of many Aboriginal creation stories. If we try to convert the words commonly used in Aboriginal languages and use an English word, we should avoid the term *Dreamtime* and use the word *Dreaming*.

The Dreaming is, however, more than just an explanation of cultural norms and where we came from. The Dreaming is a complete guide to life and living. It is an encyclopaedia of the natural world. It is not just stories. It is art, songs, and dance. It is written into the land and the song lines of our country.

This encompasses our traditional teachings, language, and culture as Aboriginal spirituality is the heart of our culture. All Aboriginal people identify with a specific Dreaming. It gives us identity, dictates how we express our spirituality and tells us who is related through different kinship systems.

Cultural Learning Environment and Resources

An appropriately resourced cultural learning environment is one where students and staff alike recognise, appreciate, and capitalise on diversity to enrich the overall cultural learning experience. Fostering a culturally inclusive learning environment encourages all individuals— regardless of age, gender, ethnicity, religious affiliation, socioeconomic status, sexual orientation, or political beliefs—to develop personal contacts and effective intercultural skills that can lead to positive attitudes towards ATSI people. A cultural learning environment with the correct resources of Elder and community people enables the students and staff to build useful strategies for establishing characteristics of cultural experiences, mutual respect, and genuine appreciation of ATSI diversity.

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Emphasis on Cultural Identity

Relationships between young and old in each culture exist to teach and reinforce culturally appropriate behaviours, attitudes, and values. For ATSI people, this is performed through our stories, dances, art, and customs.

My people's identity has been constructed, shaped, and lived in the context of contemporary colonialism. ATSI communities, clans, and nations are Indigenous to the lands and countries we inhabit. These communities link our Indigenous identity closely with the country in which it emerged.

Aboriginal Australians see 'country' as the central aspect of our identity. The invasion and occupation of our land did not simply amount to a physical loss of territory and sovereignty. Occupation and colonialism had an influence far beyond the physical for ATSI people by bringing disruption or loss of language, beliefs, and social structures. This disruption and loss forms the underlying basis of culture that defines who we are today.

Not every Aboriginal teacher or Aboriginal Education Worker (AEW) is an expert on all aspects of Aboriginal culture but an openness to listen to an Aboriginal teacher and AEW will assist in avoiding obvious mistakes when interacting with Aboriginal people.

The Aboriginal teacher and AEW can assist teachers to gain an understanding of local Aboriginal history, language groups, and family groups in the area, and adopt culturally appropriate behaviour when meeting and working with Aboriginal people. They can also inform teachers about special considerations in communities, such as which places can be visited and what cultural practices must be followed. These can vary from community to community. Aboriginal people will appreciate the interest and the fact that non-Aboriginal teachers are trying to learn about and understand our culture.

Developing cultural competency can be as simple as making an effort to get out into the community, talking to Aboriginal parents, and getting to know families, as well as the local Aboriginal community groups and organisations.

Many principals find that relationships between their schools and communities are enhanced by

the activities that can be undertaken by an Aboriginal teacher and AEW, and in particular by:

- establishing and maintaining contact with families
- encouraging students to attend school
- supporting parents who might be uncomfortable in schools
- sustaining positive relationships with teachers.

Some ways to build relationships with the local Aboriginal community include:

- learning about the Aboriginal history of the community
- making time to develop relationships with parents and caregivers
- participating in cultural awareness provided by Aboriginal people locally and within the region or education system
- attending community events such as NAIDOC Week activities
- participating in school network meetings, such as the school and community partnerships working groups; for example, the Aboriginal Education Consultative Group (AECG)
- becoming informed about contemporary Aboriginal culture by attending events such as Aboriginal film festivals, theatre, and art exhibitions.

A 'one size fits all' approach will not work and we need to tailor our ways of working and communicating to meet the needs of the individuals and communities concerned, especially as Aboriginal people across Australia are very diverse.

Pedagogy and Leadership

Experiential learning can be described as essential Aboriginal traditional teaching and learning, since this process entails the making of meaning from direct experiences, through reflection on doing or action. Experiential learning—including learning from the land, from Elders, by experiencing traditions and customs, from community members, and through parental and family support mechanisms, is a vital, but often unrecognized, form of Aboriginal learning.

The first principle of Aboriginal learning is a preference for experiential knowledge. Indigenous

pedagogy values a person's ability to learn independently by observing, listening, and participating with a minimum of intervention or instruction.

The essence of experiential learning is that what is learned has meaning to the students' own needs and goals, and to the Aboriginal community in which the students live.

Providing a learning climate where students can design their own experiential learning is empowering and provides a multi-layered educational experience, because the student engages in the planning, implementation, and evaluation of their own learning. Our Elders encourage each person to glean their own personal 'lessons' from each experience.

To understand truly what an Aboriginal worldview is in regards to education, one must fully embrace all of these cultural qualities and 'walk-the-walk' in the footsteps of an Aboriginal person as we walked and learnt the song lines of our ancestors for thousands of years. Aboriginal culture is unique among other cultures in Australia through the richness of our cultural knowledge and traditional customs we still practice.

Aboriginal culture is grounded in a non-European and non-Western worldview.

European and Western worldviews have at their heart ideas of:

- Progress and change—the world progresses and things improve
- Roles and functions—things get done in society because people have roles and functions.
- Time is linear and measurable
- Ownership
- Counting, measuring, dissecting, and analysis
- Written culture.

At its heart, an Aboriginal worldview consists of:

- Continuity—things stay the same
- Relationships are how things get done
- We don't own the land—we care for it—we are traditional custodians
- Whatever we have it is shared with everybody else, community

- Holistic and relational
- A strong oral culture.

Educational systems need to understand what an Aboriginal worldview can deliver in the context of continuing a positive learner-centred approach. Networking is vital for teachers and schools in order to celebrate our shared history and community engagement is the key to success in embedding the Australian Curriculum cross-curricular priority of ATSI histories and cultures. We will all benefit by deepening our knowledge and opening our hearts and eyes to fully embrace Aboriginal culture in participating positively in an ongoing development for Aboriginal education and worldview across all educational systems in Australia.

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Training pre-service teachers through a 'virtual' classroom: The changes and challenges to build a better future

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Biography

Prior to her appointment at Charles Darwin University, Sharon Lierse was Associate Professor in the Faculty of Music and Performing Arts at Universiti Pendidikan Sultan Idris in Malaysia where she was founder and Managing Editor of the Malaysian Music Journal (MMJ). Sharon has also lectured at the University of Tasmania, and was Manager of Professional Learning at the Australian Council for Educational Research. Sharon has published widely and has given conference papers around the world including keynote presentations in Europe.

Abstract

Education has undergone a transformation during the twenty-first century, the most notable being the development of technology and its impact on higher education courses. Students who otherwise would not have access to learning are now completing courses remotely, and many courses are available completely online. This change has presented new opportunities in the tertiary marketplace resulting in an increase in teacher education courses. However, this has created challenges for institutions to find pre-service teaching placements in schools in an increasingly competitive marketplace (Australian Institute for Teaching and School Leadership, 2015). One solution is to provide students with placement experience using a virtual classroom (Glava & Glava, 2011; Reiners, Gregory, & Know, 2016; Wollard, 2011). This option would not replace but complement the existing approach. This position paper will discuss the advantages and disadvantages of the application of specifically tailored digital technology and how this may impact mentor teachers, school principals, and students. A virtual classroom provides opportunities to create higher quality teachers; and this may build a better future world (Wong, 2016).

Introduction

In the twenty-first century, education has witnessed a transformation. Technology has played an increasingly important role that has been embraced by both teachers and students. Communities in remote and regional areas have access to the latest technology which they can be kept up-to-date with the latest information. Students have opportunities for further study and icareer changes for which their studies may be completed online. However, these opportunities have also created issues in regards to demand and supply of services, most notably in the overcrowded higher education sector.

Current issues in education

In a rapidly evolving educational environment, universities are faced with new demands and pressures. The decrease in university funding by the government has impacted the cost of higher education resulting in fees being increasingly influenced by market forces. Education courses which traditionally have been economical to run have been used as 'cash cows' for institutions.

The development of information technology has dramatically impacted higher education with students, who otherwise would not have access to learning, completing courses online. The *Initial teacher education: Data report 2015* (AITSL) found that there was an 'overall increase in the number of students studying through an external mode of

attendance, with a 93 per cent increase since 2005' (p. x). One outcome was that students who were 'studying via an external mode of attendance had higher success rates than their counterparts across all Fields of Education' (p. 48).

Consequently, there has been a significant increase in students studying education and higher education providers. In Victoria alone, it was estimated that 25,000 professional-experience placements are needed each year (Teacher Education Ministerial Advisory Group, 2014, p. 28). According to the Australian Institute for Teaching and School Leadership (AITSL), in 2013 there were 48 providers offering 406 initial teacher education courses to over 79,000 students (AITSL, 2015, p. 4). The number of course completions that year was 17,903 students (p. 4).

The current requirement for pre-service teachers is 'no fewer than 80 days in undergraduate and double-degree teacher education programs and no fewer than 60 days in the graduate-entry programs' (AITSL, 2011, p. 17). This has contributed to the glut of students needing to complete their placements, and pressure on schools and mentor teachers to accommodate the increase in numbers. The current state of teacher education is not sustainable if this trend continues. There will come a time when there will be too many pre-service teachers, not enough schools for placements and an oversupply of graduate teachers.

Currently pre-service teachers complete their placements in schools through observation of classes and taking lessons with the mentor teacher providing feedback. Pre-service teachers often have little choice of the school and many have to travel long distances, especially those who reside in regional and remote areas. The Teacher Education Ministerial Advisory Group (2014) state how 'teacher education faculties are finding it difficult to obtain sufficient professional experience placements and that this is especially true for providers located in regional areas' (p.28). The lecturers are under pressure to visit students with increased workloads and number of students on placement in a limited timeframe.

When visiting the school, the lecturer will only have time to observe a snapshot of what has occurred. The training of the pre-service teacher is the joint responsibility of the mentor teacher and university lecturer, and, if this relationship fails, it can be detrimental to all involved.

Another issue is the timing of the school placements during the courses. There is an advantage of pre-service teachers commencing their placement as early as possible to determine whether this is the right career path for them. This is confirmed by the Teacher Education Ministerial Advisory Group (2014) who state, 'There were strong suggestions that professional experience needs to commence earlier in the course, allowing pre-service teachers to be exposed to a wider variety of experiences as well as having the opportunity to determine whether they are suited to teaching' (p. 104).

A solution needs to be found where students can still complete their teaching placements to receive their accreditation. Other professions have adapted their internships not by choice but by necessity. This has been due to the oversupply of students and higher education providers. For example, nursing students commence their placements in supervised, simulated hospital wards working with sophisticated mannequins. Law graduates can obtain admission to practice law through a specially designed course such as at the Leo Cussen Centre for Law.

A solution

A virtual classroom would reduce the issue of oversupply of pre-service teachers and create an opportunity for them to trial teaching techniques and strategies. These have already been developed for use in some universities (Reiners, Gregory, & Know, 2016; Wong, 2016). The Teacher Education Ministerial Advisory Group (2014, p. 28) acknowledges that:

> *the challenges surrounding the cost of professional experience placements, consultations highlighted some solutions suggesting greater flexibility in placements and supplementing placements by utilising technology . . . [and how] recent practice has shown technological approaches will not replace experiences in the classroom but can complement face-to-face professional experience. Pre-service teachers can be exposed to teaching scenarios and teachers without the limitations of attending in person. Online technologies are ideal for allowing exposure to experienced teachers who can demonstrate ideas and techniques for addressing challenging scenarios. Pre-service teachers can benefit from seeing how different teachers approach different issues and, through discussions, reflect on their own approaches.*

In Australia a project called VirtualPREX was developed by seven academics across four Australian universities after receiving an Australian Learning and Teaching Council (ALTC) grant. VirtualPREX was a collaboration with the University of New England (with Dr Sue Gregory, the leader of the project), Curtin University, Charles Sturt University, and RMIT University. Here 'pre-service teachers are given the opportunity to practise their skills and develop confidence in dealing with the different behaviours of school children' (Reiners, Gregory, & Knox, 2015, p. 169). They use robots called BOTS to take on the role of good or naughty students in which pre-service teachers 'will be provided with increased opportunities to practise, try out skills, and apply concepts in authentic and immersive learning environments, asynchronously through interaction in and with the bots" (Reiners, Gregory, Knox, 2015, p. 178). There is also opportunity for assessable tasks (*VirtualPREX*).

The University of Florida has also developed a virtual classroom which has already been used by over 10,000 prospective teachers (Wong, 2016). The rationale for this was to diminish part of the disruption to schools through multiple placements and help new pre-service teachers hone their skills prior to being placed in a real teaching situation (Glava & Glava, 2011; Wollard, 2011).

Advantages

There are numerous advantages with the introduction of new technologies for pre-service teacher placements. The virtual classroom will reflect the pressure of being in a real classroom. The introduction of a lower-stakes environment and opportunity to trial techniques with feedback from the lecturer and peers may provide a more positive outcome (*VirtualPREX*).

Pre-service teachers would be able to be assessed by the university thus taking some of the pressure off the schools. Those who are not prepared for school placements or require reinforcement in particular areas will be able to practise their craft in a non-threatening environment. This is especially important for pre-service teachers who are from overseas and have a different understanding of the role of the teacher and student. Classes could be recorded and watched, which would provide critical feedback and reflection. Moreover, students who are academically sound but not suited to the

profession could discover what it is like working in front of a class and with children before travelling to a school for a placement (Wollard, 2011). This approach may cut some of the travel costs for one-on-one school visits by lecturers. The university would also be able to create a more complete profile of each pre-service teacher when on placement and then be able to have more constructive and in-depth discussions on their practice. One major advantage, especially in Australia, is the use of the technology for students in regional and remote geographic areas who would find it difficult to travel to schools.

Disadvantages

Introducing new technology to an existing program can create teething issues. First, there is the cost and implementation of the new technology. Higher education administrators need to be convinced that they will receive an adequate return on the investment and that the program is superior to what is already in place. Issues of copyright and licencing would need to be reviewed. University lecturers would require training in using the technology and knowing how to rectify any issues that occur. The technology may not be appropriate or suitable in some contexts. The program may not cater for students with challenging behaviours, students with special needs, Indigenous students, or differentiated classes..

Mentor teacher

Mentor teachers at a school who supervise a pre-service teacher with virtual training should initially be presented with a better prepared and more experienced potential teacher. There would be less pressure on the mentor teacher to explain the fundamentals of teaching techniques, and this would free them up to focus on wider aspects of the profession. The fewer days that a pre-service teacher would need to spend at a school would result unless disruption to the classroom. Overall, it would be a more positive experience for the pre-service and mentor teacher.

School principal

The school principal takes on a responsibility when a pre-service teacher completes a placement at a school. There is a risk that the pre-service teacher may not be successful which may negatively impact on the progress of the class and the reputation of the school and the university. This becomes an issue for school students who are

about to sit high stakes examinations, and for schools where parents are paying high fees. The advantage of a virtual classroom is that the principal can ask the lecturer about the teaching style, personality, and suitability of the pre-service teacher before he or she commences at a school.

Students

Students have the uncanny sense of knowing whether a pre-service teacher has the ability to teach. They also know how to test and challenge a pre-service teacher. Through the use of the virtual teaching software, these situations can be pre-empted and discussed before the first day at a school. The pre-service teacher can commence a placement with more experience and understanding of how to handle difficult situations as well as how to create a positive school environment.

Conclusion

Australia has used the traditional pre-service school model to train the next generation of teachers. Due to issues of demand and supply of teachers at schools, geographic distances, and the reliance of information technology there will be a time when this system may become ineffective. The application of a virtual classroom has many strengths as well as challenges for implementing a new approach to a profession which has traditionally relied on experience in a 'real-life' school situation. In the future, the virtual classroom may be introduced across many Australian universities which will present a new chapter in how we train and prepare the next generation of teachers.

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