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From the Editor's desk

Dr Trace Ollis

This first edition of AJAL for 2020 is written at a time when Australia is experiencing unprecedented change. After devastating bushfires over the summer and the loss of human life, property and wildlife, we are now responding to the impact of a global pandemic COVID-19. We are still grappling with what this means for those of us who are employed as teachers and educators in spaces of adult learning in Adult Community Education (ACE), Vocational Education and Training (VET) and higher education, and the impact of the virus on Australians in terms of current and future work. As education and learning moves from the classroom space to one that is delivered primarily online and through the use of technologies such as Skype and Zoom, this poses new challenges for educators regarding the use of technology and using different and new pedagogical approaches to teaching and learning. COVID-19 has seen unprecedented job losses and unemployment, most education is now being conducted online and in-the-home, as we work, learn and study in new ways. In the adult education space, the impact of the pandemic poses challenges, with large job losses predicted in Universities as well as for casual and contract staff in VET, TAFE and ACE. When we emerge from this crisis, adult education and training will be more important than ever before as economies adjust and new industries emerge.

Adult education will play a huge role in reskilling and retraining the post pandemic workforce. This new environment of learning has also revealed how nimble and flexible the adult education sector is in Australia and how committed teachers are to delivering quality pedagogy and learning experiences for students. However, these challenges come at a time in Australia where we don't have a lifelong learning policy, and on a national level, we haven't had a COAG Ministerial Statement on ACE since 2008. In addition, funding for adult education in Australia is provided by various levels of government on a local, state and national level, with limited coordination and cooperation about how education will be framed and delivered between these three levels of government. A cohesive and comprehensive national strategy on adult education is needed now more than ever before, informed by a highly developed and refined national lifelong learning policy.

On a different note, I am pleased to say AJAL turns 60 years in 2020. It is one of the oldest journals in the world with a specific focus on adult education in Australia. It has a proud history of promoting adult education scholarship in Australia and around the world published by Adult Learning Australia, the peak body in Australia for adult learning. Its international recognition is there in the impact and rankings of the journal. It is one of only three journals on adult learning listed in the Web of Science, and under the former ERA rankings it was ranked A. In the SCHIMAGO journal ranking system of quality journals, it is currently ranked at Q2 for digital learning and Q3 for adult learning. It has an H index of 15. AJAL certainly punches above its weight for a small journal published by a national peak body and one which is not held within a large publishing house. There is much to be celebrated. It has supported and nurtured academic scholarship in adult, vocational and higher education for six decades. In many ways, AJAL is an archive of the changing nature of adult education in Australia. It has advanced new research, literature and scholarship on current trends in practices of adult learning such as lifelong learning, work-based learning and practice-based approaches to education, transformative learning, public pedagogies, popular education and literacy and language learning and teaching. In celebration of 60 years of research and scholarship in adult learning, AJAL will have a special edition of the journal published in November 2020, titled 'Adult learning: Transforming individuals and communities over the decades', led by leading adult learning

scholars Associate Professor Annette Foley and Associate Professor Rob Townsend both of Federation University. Furthermore, the special edition of the journal will include a feature article commissioned by Adult Learning Australia from Professor Barry Golding which reflects on the 60 year history of the journal.

The papers for this edition of the journal traverse a variety of spaces of adult education, such as vocational education and training and higher education; they focus on mindfulness and adult learning, study tours, assessment, and non-traditional students in higher education. In the vocational education space, there are papers on knowledge in VET and knowledge making in the fitness training industry.

This edition is led by a thoughtful feature article written by ***Tony Brown*** 'An age of endarkenment? Can adult education still make a difference?' It outlines the changing space of adult education and its ability and power to change lives, noting that in Australia it has always been led by teachers and scholars that have been highly adaptable and flexible. He claims there is declining support for adult education "at a time when there is growing public disenchantment with the political system, an uncivil public discourse, technological disruption and well-grounded fear for our environmental sustainability". Although Brown notes these are difficult times for the ACE sector, there are also inspiring examples of adult learning across Australia. The paper concludes that there are challenges for governments in terms of policy, but also for educational organisations and educators. However, the costs of ignoring the challenges facing us are great and this can be remedied by focussing on a more 'sophisticated and agile lifelong learning policy framework'.

The refereed section of this issue commences with ***Sally Thompson's*** paper, 'A vocational stream for social care workers: A case study', explores competency-based training in a health service course delivered in a dual sector university. In the paper, she examines the delivery of a competency-based training course to learners who have experienced educational disadvantage and considers whether competency-based training packages can deliver empowering learning experiences to disadvantaged learners. This case study draws on the voices of service users, in order to build an effective program for entry level learners.

'Meeting the transformational demands of our rapidly changing world: Mindfulness as a moderator of self-directed adult learning and change'

by ***Thomas Howard Morris*** explores the potential of mindfulness in modulating the expression of implicit motivation. It claims mindfulness appears to act as a moderator between implicit motivational disposition and day-to-day motivation for behaviour: by promoting cognitive openness and less behaviour avoidance – essential components for enabling learner transformation.

In the article 'Misconceptions in the knowledge of vocational fitness students and graduates' by ***Daniel J Jolley, Melissa Davis and Andrew P Lavender***, they outline their research in critical thinking amongst VET fitness students and personal trainers. The authors argue that instruction in critical thinking should be embedded at lower levels of VET, and exercise professionals should be encouraged to undertake higher levels of study.

In the paper 'Opportunities for change: What factors influence non-traditional students to enrol in higher education?' ***Deanna McCall, Deborah Western*** and ***Melissa Petrakis*** examine the changing nature of the non-traditional students in higher education amidst the backdrop of the massification of higher education in Australia. They argue that non-traditional students are now the new normal in higher education. They claim non-traditional students have a variety of reasons for participating in higher education, and notable was that timing (the right time in life) was a major theme. They claim enabling programs offer students an opportunity to attain a qualification to enable enrolment in higher education, but also provide an opportunity for social change in individual lives and broader society.

The final article for this edition, 'Making the intangible, tangible: Assessment design that fosters curiosity, confidence and collaboration during international short-term study tours for Australian students' by ***Mark William Pennings, Debra Flanders Cushing, Rafael Gomez*** and ***Clare Dyson***, explores the immersive education space of study tours in a creative industry at an Australian University. Using action research, the authors developed assessment modules to encourage student awareness of the development of the intangible skills, learning and growth that occurs amidst a study tour. This study highlights the potential significance of immersive assessment modules that encourage students to engage with their host country and the cultural differences to which they are exposed.

Book review

A first in a series on 'classic' adult education texts, our book editor ***Cheryl Ryan*** reviews 'Contemporary Theories of Learning: Learning Theorists ... In Their Own Words' edited by Knud Illeris. Reviewing classic adult education texts as well as new adult learning books will be a feature of our book reviews in upcoming editions of AJAL.

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An age of endarkenment? Can adult education still make a difference?[1]

Tony Brown

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Adult education has the power to change lives, and in Australia has always been made up of educators and providers capable of adapting to the changing environments around them. Today, however, there is declining support for adult education at a time when there is growing public disenchantment with the political system, an uncivil public discourse, technological disruption and well-grounded fear for our environmental sustainability. This makes the challenge for adult education to meet the varying needs of adult learners more difficult. How might we think of adult education and learning for today's challenging times?

To begin I want to acknowledge the Gadigal people of the Eora Nation, the Indigenous owners of the land where we meet and pay my respects. I learnt from listening to Welcomes to Country about personal connection to the land, about how integral the acknowledgement of forebears and country is to identity. Those who welcome acknowledge their past in order to locate themselves in the present. It is such an important lesson for all of us.

[1] This paper is based on an address presented as the George Shipp Memorial Lecture WEA – Sydney in November 2019.

I have been working in adult education for over 25 years now. I've worked in policy and administration in the public service; as the Director of Adult Learning Australia in an advocacy role; and then in two Universities teaching adult educators and researching in the broad field of adult learning. For a decade during that period I was also a Board member of my local Community College. I recently retired from full-time work but continue to write and do some casual teaching, but also, I am now a regular participant in short courses in areas including film making, photography, history, needlework, and travel writing.

I was asked to speak tonight about adult education today and to consider where it stands and whether it is positioned to continue to make a difference. To do so is to tell a mixed story.

I want to say three things:

1. These are difficult times for adult education. But simultaneously there are inspiring examples of the power of community education – as there always have been in Australian adult education.
2. Is government policy, and our own thinking about what adult education is today, fit to meet the needs and challenges of our world?
3. And finally to consider the above in the context of some history.

Looking back

In 2019, there were two significant centenary anniversaries that are important in the history of adult education. They both emerged in the aftermath of World War I and the need to rebuild societies devastated by war.

a) In 1919 the UK Ministry of Reconstruction was given the task to report on what would be needed for Britain's future. We face some crises today but the challenge confronting Britain then was immense. Yesterday's 101st anniversary of the Armistice could have reminded us that in Britain 14 per cent of the entire population had been mobilised; 6 per cent of the population had been killed or wounded; 2.2 per cent of the population (mostly the young men of the land) had been killed.

   The Ministry of Reconstruction's Adult Education Committee published its report titled *The 1919 Report* (UK Ministry of Reconstruction, 1919, see also Stanistreet, 1919, and Centenary

Commission on Adult Education, 2020). It was hugely important. It lifted its gaze above the immediate to consider how education could contribute to 'national life with a more durable foundation'. It could easily have adopted the view that skill development and physical infrastructure were the immediate and sole need. Yet it saw the goal of education as being 'citizenship' – 'the rights and duties of each individual as a member of the community; and the whole process must be the development of the individual in relation to the community'. It advocated that 'every assistance should be given to voluntary organisations, so that their work … may be developed and find its proper place in the national education system'. Technical education while 'necessary and beneficial' and an integral part of the educational system' was not to be thought of as 'an alternative to non-vocational education', which it considered a 'universal need'. It made many other arguments but of particular importance was the view that adult education was 'an activity indispensable to the health of democratic societies'.

b) In Europe, the Weimar Republic, the short-lived attempt at democracy in Germany between the end of World War I and the ascent of Hitler's Nazis in 1933, was born. The 1919 Weimar Constitution made adult education a key component of a comprehensive education system, alongside formal school and higher education. The German adult education centres that emerged, the Volkshochschulen, were 'open to all citizens' and seen as places crucial to democracy, where 'people with different and conflicting interests, values and attitudes can deal with important social developments, negotiate compromises and find solutions for their coexistence.'

   In both cases they were looking to create societies that could deal with the dislocation of the war but on the foundations of strong civil societies and a deeper democracy. And both occurred just five years after the WEA was founded in Sydney by Albert Mansbridge, who had been one of the key committee members of the 1919 UK Report.

A short detour – a story

I live in inner-west Sydney, and for 10 years I was on the Board of the Sydney Community College (SCC). Its local area includes the suburb of Balmain. Back in 1865 the Balmain Workingmen's Institute was founded

– for the *moral, social, and intellectual improvement of its members*. It took another twenty years for the Institute to obtain a site and accumulate the necessary funds to construct a purpose-built building. But by the end of the century it had grown to include a 400-seat auditorium; a reading room and large lending library; a number of meeting and classrooms – and a six-table billiard room (Balmain Municipal Council, 1910, 47, see also Morris, nd). At that time billiards tables were both popular and uncommon, and the Institute could charge 1 shilling to play, which proved to be a valuable source of revenue – and a means of subsidising other courses.

Fast forward and in 2010 SCC took over the lease of a mid-sized outdoor Tennis Centre. It had been run by the local Council but was run down and in need of refurbishment. You might ask what has operating a Tennis Centre got to do with providing adult education? Well at one level it established new fitness programs, after-school and vacation tennis camps and contributed to the community's general health and sociability.

But in reality it was doing what the billiards tables had done one hundred years earlier. The money raised from the Centre helped the College, which was financially struggling after having had almost all government funds cut, to cross-subsidise the general program and stay afloat.

As adult educators what can we take from these two anecdotes? We can pat ourselves on the back and feel proud of our historic ability to adapt, be resilient and survive, or alternatively we can feel some discontent and question why? We could argue that this is no way for governments to support such an important element of our educational provision, or provide the opportunities required in a modern 'learning' society of multiple and diverse needs.

A recurring story

Yet this has been the recurring history of adult education in Australia, which has been primarily one of self-organisation and financing through community groups, voluntary and membership bodies.

State support has been inconsistent and sporadic, at times rising and then falling away again. Provision has therefore needed to be self-sustaining, and, in the absence of government support, providers have found ways to be flexible, innovative and responsive to local need. In the main, governments have left the education of adults to local providers.

This changes from time to time. Governments at different levels have different problems to address at different times. So, we see opportunistic funding aimed to meet that specific problem – creating a market for VET in the 1990s was the spur for ACE receiving increased support in the late 1990s and early 2000s, supporting the introduction of GST in 2000 was another example.

Yet a decade later and the NSW government had all but stopped providing any funds for community-based adult education. Today funding is increasingly tied to specific needs associated with issues such as disability and/or mental health issues; young people who have left the school system; or as an entry level to accredited VET.

ACE's value is seen as a *residual provider* of emergency education, or for those unlikely to fit in the system. Should the adult education sector be satisfied with becoming a residual sector? Or is it more than that?

There remains hesitancy to promote or celebrate the full breadth of adults' learning interests because providers have absorbed the need to promote bottom-line thinking, to frame funding submissions and promotions around the vocational outcomes courses deliver. This shouldn't come as a surprise after years of grooming, but it does mean that the less-quantifiable benefits associated with adult education which also includes learning crafts, languages, literature, technologies – those activities that engage our imaginations and where the hands and senses experience pleasure are minimised.

Internationally the story is similarly mixed. In the UK, funding for adult education has been cut by 45 per cent since 2010. The number of part-time students in higher education, who are typically mature-age learners and often juggling work and family pressures, is down 56 per cent over the same period.

2018 UK Department of Education figures revealed the drop in adult education participation corresponds to cuts in government funding. The decline in participation has been *dramatic and rapid* with a 15 per cent fall in community learning in one year between 2017–2018, and 33 per cent fall in Level 2 courses over the same period (Belgutay, 2018).

In Germany of the three major educational sectors – universities, vocational and adult – only in adult learning has public funding fallen since 1995, dropping by 43 per cent. Yet the reduction in public

funding for adult learning has occurred at the same time as public policy announcements are made on the increasing necessity of learning through life (cited in Field, 2019).

Germany does, however, provide a glimpse of what is possible in providing relatively generous (compared with other European nations) adult education opportunities for migrants wanting to develop their language skills and integration prospects. A 2018 survey of over 600 people showed participants came from 19 different countries with 71 per cent from war-torn Syria. Around a quarter had spent less than 10 years at school; three-quarters had some English proficiency and a quarter French. There was a clear sub-group of disadvantaged learners who had relatively short schooling, limited occupational experience, and little foreign language competence. We should ask whether the restrictions of Australia's AMEP could be relaxed and the program expanded so that rather than criticise migrants and refugees, or question their preparedness to adapt to Australian life, governments gave a helping hand to assist new arrivals with language skills and other skills to integrate in their new society?

Recognising the benefits of learning

There is powerful evidence that adult learning has positive health effects, prolongs active life, strengthens civil society and democracy, and fosters inter-generational learning and more.

A 2012 report identified 5 beneficial areas – mental health and wellbeing; physical health; family and parenting; civic participation; and attitudes and behaviours. It found *personal benefits* such as improvements in life satisfaction and self-worth and reductions in self-reported depression, as well as *economic benefits* such as a reduction in the number of GP visits, the desire to find a better job, and improved financial expectations (BIS, 2012).

Other research reported *unanticipated benefits of learning*, ranging from reductions in medication use and overcoming isolation and loneliness, to improving racial tolerance and increased involvement in voluntary work (Feinstein et al 2013).

Adult education offers *second* chances to people who missed out in their earlier education, and *first* chances to people who never had the

chance to go to school. Adults who learn have a positive impact on their families, too. Sticht (2001) referred to this as *'double duty dollars'* meaning that 'when we invest in the education of adults we may get multiple returns – in other words, teach an adult, especially a mother, and children will also learn better.

These and similar reports have been around for many years.

I don't want to spend too much time on repeating these findings. They are not hidden, they are in plain sight and policy advisers and governments know of them because they have most often commissioned them. So, it's not a matter of making the case but asking the more pressing question – why don't they act?

There is a longer answer to this, which there isn't time for just now. But we can say that since the late 1990s Australian governments have adopted a hands-off approach, and a conscious policy of not developing an integrated policy framework for education and learning. It's not confined to adult education but it's very clear in this area. There is a literature explaining this policy freeze but I thought Mike Cannon-Brookes from Atlassian put the problem with such an approach very succinctly when referring to Australia's lack of a climate policy framework – he said 'Having no policy framework is like having no compass in the desert – you've got Buckley's chance of finding your way out' (Boucher, 2019).

I think we should expect more from governments. But we should also ask the question of ourselves, are educational organisations well placed to respond, or adapt to, the complex changes taking place around us. Is our education system fit for purpose for today's world, for the society we live in?

An ecology of providers – and learners

Maybe we need to re-think the way we understand education. If we stop thinking of education, and an individual's learning history, as a simple, one-directional 'pathway' and instead recognise that we each follow different, often complicated routes, sometimes circuitous, moving in and out, and back and forth we can start to see things differently.

A better way, I think, to conceive of education and learning after age 17 is as an ecology or an ecosystem. This is pertinent to the broad educational

environment that now ranges from early childhood, to school-age, vocational and tertiary provision, community-based, professional, work-based, as well as formal, non-formal and informal delivery.

In this educational environment, an inter-connected and inter-dependent array of providers and opportunities co-exist – where the health and sustainability of one element is strengthened by the mutual health of the others.

Thought of this way, it is easier to appreciate the link between pre-school learning and higher education; between professional development, craft courses & community health programs; between community adult literacy and job programs, and so on.

It not only applies to institutions, but to individuals as well as they move in and out of learning. They move between different educational settings and are equally reliant on the availability of quality and relevant learning opportunities. It accords more closely with how adults go about organising their own learning, which is arranged through communities of interest; through local organisations and networks and is often place-based; via self-help and special interest groups; or by individually motivated learning.

Challenges for education and ACE

There are many challenges – climate and the environment; mental health, and physical health (modern diseases); the organisation of work today and the future of work; increasing inequality; reconciliation of outstanding issues between non-Indigenous and Indigenous Australians, rapid changes in technology and their impact on ways learning will be undertaken, and so on.

And undoubtedly there continues to be many examples of innovative and responsive programs serving local and social needs. The refugee Learn to Swim at Leichhardt Municipal Pool, Corryong's social enterprise bakery, individualised disability learning plans, men's sheds and health, community gardening in Hobart and social re-integration, and more recently short courses on how to better understand and respond to the climate emergency triggered bushfire disaster of the 2019–2020 summer.

These one-off initiatives are important, but they can also distract us from better appreciating the larger underlying changes taking place, changes that require shifts in policy thinking.

Let me look at two areas, firstly ageing and demographics, and secondly trust and disillusionment, the challenge to the democracy we live in.

Ageing

Participation in education is sharply differentiated by age group, falling with each decade's demographic group. In *Learning through life*, Schuller and Watson (2009) highlight four distinct, if overlapping phases of lifelong learning. Looking at learning through this prism poses questions about education provision and support. They describe the four stages as:

1. up to age 25, where people are undertaking more and more complex routes to labour market participation;
2. between 25–50, where a combination of job, family and social obligations make time for learning hard to find for many;
3. between 50–75, where adults begin disengagement from their main working lives, and take on many of the responsibilities for maintaining civil society, and often have caring responsibilities for younger and older family members; and
4. at age 75 plus, where later life brings its own distinct learning challenges – and disrupts the previous orthodoxy of third age learning.

One in four Australians are in formal education (pre-school to school to higher education) and this is the overwhelming focus of governments. Yet almost five million, *or one in every five*, Australians are over the age of 60 and not focussed on formal education provision.

It is striking how little current provision differentiates between the different aspirations and interests of these cohorts, and how a growing proportion of the population are not being included in the nation's education attention.

Trust and disillusionment

But there is something else swirling around all of us that has been disorientating and confusing as it has shaken expectations of what were commonly held norms and beliefs. The reports of 1919 were acutely aware how important education for citizenship and democracy were in a damaged

world, and in the years that followed there was a shared belief that education was the way to improve individual lives and to progress society.

Emblematic of this belief is the large sculpture erected in 1933 overlooking Rockefeller Plaza in New York, which confidently asserted that:

Wisdom and knowledge
Shall be the stability of thy times.

It's something that needs to be put at the forefront again because today across the Western world, there is a rising anger at 'the system'.

This anger is implacable and spectacular. It is causing long-established party systems to dissolve; trust in elites, experts and even basic science to collapse; and overt racism, notably anti-Semitism, to rear its ugly head again. Democratic norms and institutions are openly disdained; illiberal and authoritarian ideas from the alt-right and far left are moving from the fringe; and everywhere, truth and civility are squeezed out amid rancor and conspiracism. Rather than enlightenment it has led some to suggest we have entered a 'new age of endarkenment' (see Gray, 1995, Morarjee, 2016, Pinker, 2018).

Many people despair that the promises made to them by those in authority and power will ever come true, they now seek to turn the whole thing upside down, however they may. The relentless waves of change that have crashed over people's heads have made some into winners – most spectacularly, the gilded one per cent. But many others have experienced change as a profound and traumatic loss.

The many left behind have seen inequality explode. In their study *'The spirit level: Why equality is better for everyone'*, Richard Wilkinson and Kate Pickett demonstrated that extreme inequality is associated with rising illness, family breakdown and crime, mental distress and increased drug use – as well as a general fraying of what policy makers call 'social cohesion'.

This reversal of the traditional trajectory is acutely painful because so many know they are unlikely to ever be able to break into the ranks of the winners. They are in a situation where

- growth doesn't grow;
- prosperity doesn't prosper, and

- the country is no longer arranged in a way so as to make its citizens economically secure.

And it is this nasty mix that has the potential to fester, and which our forebears in 1919 were acutely aware that adult education had a vital role to play in creating an environment to learn, discuss and help build informed and engaged citizens.

A paradox

As adult educators we live in a paradox. Adult education is everywhere around us – in formal education; in community colleges and centres; but also through government departments in the environment, health, ageing, transport; in Indigenous programs, book discussion groups, film groups, political parties, unions, faith-based organisations, men's groups / women's groups, in workplaces, professional and employer associations, seniors groups, friends of galleries, the zoo, museums, libraries; gyms and fitness centres; meditation and yoga groups, sporting bodies, national parks , on the net, on the net, on the net.

Yet this proliferation coincides with a serious decline in support for those community organisations that are dedicated to adult learning as a specific activity. Many colleges and centres have fallen on hard times and a number have ceased to exist or merged with other providers.

And in higher education those departments that were dedicated to teaching and researching the practice of adult education have in the main been cut back to barely exist. One important result of the cuts to support community adult learning programs is that there are far fewer experienced professionals (teachers and program planners) in the system, who have acquired the pedagogic skills to be able to teach/ work in these changing times and also therefore fewer people with the knowledge, connections and passion to lobby on adult learning's behalf.

Conclusion

The power of adult education to transform lives is well known, and it is especially powerful for those who missed out on educational opportunities early in their life (James & Boreen, 2019).

There are so many inspiring programs and initiatives within ACE – including re-engaging young people, asylum seeker and refugee programs; devising individual-focussed disability education, providing a welcoming environment to adults returning to education – alongside the regular activities in languages, technology, crafts, arts, and practically based skills.

Humans are multi-dimensional beings. Getting going in systematic learning means responding to our many different interests and needs. Too much education thinking and policy however is designed for a system that hasn't kept up. Our policy thinkers are overwhelmingly focussed on initial education – the model that starts with early years and ends with labour market entry – at the expense of learning through the life course.

To put all our educational eggs in the one basket of skills and training is to set our sights too low and too narrow. It should be clear that we can't build a skilful nation on skills training alone. There are challenges here especially for governments, but also for educational organisations and educators.

The costs of ignoring the challenges around us and the need for a more sophisticated and agile lifelong learning policy framework are great.

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A vocational stream for social care workers: A case study

Sally Thompson

This article is a case study of an attempt by a team of VET teachers, researchers and users of social services to develop a more effective, knowledge rich, vocational stream qualification in the Health Care and Social Assistance industry. Health Care and Social Assistance is one of the fastest growing industries in Australia, adding entry-level jobs at a time when other industries are shedding them. Entry to this industry requires a Certificate 3 qualification from the relevant national Training Package.

Training Packages have been designed to facilitate flexible points of entry to an industry for early school leavers and other disadvantaged groups, and then pathways to further study and careers. However, a growing body of research has pointed to the weaknesses of the training package model and competency based training more generally, to achieve these aspirations. Vocational streams and enhanced attention to knowledge in VET have been suggested as alternative ways forward. This case study draws on this research, and on the voices of service users, to build a more effective program for entry-level learners, while still working within the Training Package system. It highlights the limitations of Training Package Qualifications to provide accessible points of engagement for disadvantaged learners and provide them

with the skills and knowledge required to pursue further education and build meaningful careers.

Keywords: *Competency based training, VET, training packages, case study research*

Introduction

This article is a case study based in a dual sector Australian University. Dual sector Universities offer substantial amounts of vocational education and training alongside the full suite of University activities, namely higher education courses, research and the awarding of research doctorates (Moodie, 2009). A team comprised of researchers, people with lived experience of accessing social care services, and vocational education teachers attempted to replace a number of entry level Vocational Education and Training (VET) qualifications for different types of social care workers (disability support workers, aged carers, home and community carers) with a broader program and qualification based on a social care vocational stream. The program was informed by research into vocational streams as a way to address many of the shortcomings of Australian training package qualifications (Yu, Bretherton, & Buchanan, 2013; Buchanan et al., 2009), research about knowledge in VET (Wheelahan, 2015; Pardy & Seddon, 2011; Hodge, Atkins, & Simons, 2016) and also research about the weak link between qualifications and quality of work in the social care workforce (Charlesworth & Smith, 2018; Pocock et al., 2011).

There were two stages to the process. In 2017, the University trialled the delivery of Certificate 3 in Individual Support using the standard Training Package qualification but with three specialisations (Ageing, Home and Community Care and Disability) instead of the usual one. The program was offered for free, via scholarship, to groups currently under represented in the social care workforce, namely young people, Aboriginal and Torres Strait Islanders and people from CALD communities (Department of Social Services, 2019). The program was then externally evaluated to see if it met the needs of the learners undertaking the program, and more specifically, whether it could provide a more appealing option to encourage underrepresented groups to enter the growing social care industries.

In 2018, funding was awarded by the Victorian State Government to the university for a project to develop a blended learning curriculum and learning resources to improve the program, but still within the constraints of the current Australian Training Package system. The 2018 curriculum project was designed to overcome some of the barriers identified in the formal evaluation of the 2017 delivery trial, namely, the narrowness and atomization of the Training Package units of competency, their repetitiveness, lack of important knowledge content and the need for better input from people with lived experience of using social services (Stevens, 2018). This case study explores the second stage in detail and, by doing so, it points to the limitations of training packages to provide high quality, engaging programs and qualifications that could appeal to entry level learners, and provide them with the knowledge and skills they need to pursue meaningful careers and further education.

The aim of the project under study was to create a broader qualification that covered a 'vocational stream' rather than a course aimed at one specific, narrowly defined entry-level job. Drawing on research, the goal was for an improved program and qualification that would be more appealing to groups currently ignoring the opportunity for careers in the growing social services industries, more able to facilitate labour mobility, further study and career pathways, and, most importantly, able to facilitate better outcomes for vulnerable people accessing social care services. The aim of this case study is to identify the extent to which a knowledge rich vocational stream qualification was achievable within the current Australian Training Package system. While this is one case study based on building one qualification in one Training Package, as the qualification that provides entry level work in the fastest growing occupation within the fastest growing industry in Australia, it is a significant test case for the effectiveness of Training Packages to respond to industry, individual and community need. Additional research into Training Package use in different industries and among different cohorts, such as trainees or workers 'on the job', may have different results.

Background

Certificate 3 in Individual Support (CHC3313) is a pre-service national training package qualification, aimed at learners who want to enter the growing social support workforce. The qualification is designed in a way

that allows for common units across Ageing, Disability, and Home and Community Care (HACC) recognising the commonality of skills required across these sectors. A small group of specialist units is then added to create a specialisation. By providing multiple specialisations, the qualification has been identified as having the potential to train learners across a vocational stream (Misko & Korbel 2016), defined as 'a set of linked occupations within a broad field of practice, where the focus is on the attributes, knowledge and skills a person requires to work within a broadly defined vocation that combines educational and occupational progression' (Buchanan et al., 2009).

The aim of providing a vocational stream, rather than a qualification focused on one entry-level job, was to provide students with a fuller learning experience and a broader array of future career and education options. In addition to gaining immediate employment in entry level Aged Care, Home and Community Care or Disability Support Work, it was hoped that students would have an understanding of the broader social services industries, and the foundation skills and knowledge to follow employment and further education pathways, vertically within the Aged Care, Home and Community Care and Disability sectors but also horizontally between these sectors and diagonally into other social services work at an advanced level. While it is technically possible to offer a broader, knowledge rich, entry-level qualification within the current Training Package, there are many barriers to it in practice that were explored in this case study.

The evaluation of the 2017 trial of the program (Stevens, 2018) indicated some success towards these aims. It found that the students experienced the aged care, HACC and disability components of the course as complementary. Further, students were able to articulate a meta-knowledge of the industry including the theoretical, political and historical factors that have informed current practices. Some students, for example, identified a stronger focus on empowerment, independence and social models of support in disability work than in aged care services and observed that services in aged care mirrored historical practices in disability support (Stevens, 2018, p. 12). This meta-knowledge allowed them to make choices about future career paths, with some indicating strong preferences for one sector over another, others changing their desired career path after experiencing the course and others following pathways on to further study with an enhanced knowledge of the various career options available to them (Stevens, 2018, p. 18).

The evaluation also revealed deficiencies and limitations to providing a program that met Buchanan et al. (2009) definition of a vocational stream through the existing training package. It was identified that the program didn't effectively combine aged and disability care concepts but rather added disability content to an existing aged care curriculum as disability and aged care teachers had no time allocation to work collaboratively to cluster or combine the content in a way that would meet the regulatory Standards for Registered Training Organisations (National Skills Standards Council, 2012). Underpinning knowledge was repeated again and again across units because teachers felt compelled to make each unit independently compliant, even though the content had been adequately covered elsewhere in the course. In one student's words;

> *Everything was repetitive and the content of modules overlapped, it wasn't engaging to be covering the same material for the 3rd or 4th time. Topics that were learnt originally in aged care were exactly the same at the start of disability except 'aged care' was replaced with 'disability' (Stevens, 2018, p. 10).*

Alongside repetition, students complained of a lack of content depth, wanting to know more about different types of disability, mental health, work in the home and about the National Disability Insurance Scheme (Stevens, 2018, p. 22). They also expressed a desire to spend more time analysing and reflecting on the emotionally challenging components of the course such as palliative care, elder abuse and dealing with people in pain (Stevens, 2018, p. 14). The twin complaints of repetition and lack of content depth suggested that if the curriculum was built more effectively, richer content could be covered that would allow students to feel better prepared for the transition into work or further study.

VET and the Social Care Workforce

Certificate 3 qualifications play an important role in the Australian education and training system and are arguably worthy of greater scrutiny. Certificate 3 is considered the minimum qualification for entry into a range of different industries and forms the basis for apprenticeships in most traditional trades. VET qualifications are derived from National Training Packages, which are based on competency based training (CBT). CBT uses templates to represent and modularise work tasks and has conceptual roots in behavioural

objectives theory and task analysis theory (Hodge, Atkins, & Simons, 2016). 958 000 students were enrolled in the government-funded VET system in the nine months to 30 September 2018, and of these, 42% were enrolled in Certificate 3 programs (NCVER, 2019).

Within the Community Services Training Package, the Certificate 3 in Individual Support provides a direct employment outcome in disability work, aged care work or home and community care work, as well as a pathway to Certificate 4 programs for community services jobs such as Alcohol and other Drugs Worker, Youth Worker and Mental Health Outreach Worker. It also provides an alternative non-school entry point into the Diploma of Nursing. The Australian government predicts that demand for Aged and Disabled Carers in the Australian job market will rise faster than any other single occupation over the five years to 2023 (ABS, 2018). The broader Health Care and Social Assistance industry is projected to produce 2 in every 7 new jobs in Australia over the same period from an already high employment base, as the industry adjusts to full implementation of the National Disability Insurance Scheme (NDIS), the ongoing ageing of the population and increasing demand for childcare and home based care services (Department of Jobs and Small Business, 2019). While other industries are requiring fewer entry-level jobs due to automation and digitisation, Health Care and Social Assistance will continue to be a strong source of entry-level employment. There is, arguably, a higher likelihood of an employment outcome following pre-service vocational training in Aged Care and Disability Support than in any other area of study (Department of Jobs and Small Business, 2018).

There is an ethical imperative to ensure that training in social care provides participants with a foundation of skills and knowledge that allow for labour mobility, access to further education and the ability to advocate for the industry and the vulnerable people who access its services. Despite the growing demand for workers in the industry, Aged and Disabled Carers remain among some of the lowest paid and precariously employed workers in Australia (Charlesworth & Smith, 2018). Disability support work, in particular, appears to be following a long term trend towards higher levels of casualisation, underemployment and high staff turnover; a process hastened by the rollout of the NDIS (National Disability Services, 2018). The Health and Social Care workforce is 79% female, a higher level than any

other Australian industry and gender segregation has intensified over the last 20 years (ABS, 2018). The low pay of the sector reflects the continued undervaluation of feminised work and skills and the historical mechanisms for setting pay in feminised industries (Charlesworth & Smith, 2018).

Despite the established educational pathways identified above, and a strong 'vocational narrative' centred around care that characterises the Health and Social Care workforce, labour mobility remains low (Yu, Bretherton, & Schutz, 2012). Research suggests that while technically possible, few support workers make the transition into nursing, despite jobs growth, career structure and higher pay in nursing (Yu, Bretherton, & Buchanan, 2013).

While the public rhetoric around VET suggests a neat correlation between skill development and private benefits, in their three year study of the low paid workforce, Pocock et al. (2011) identified that for low paid workers, including in the social care sector, positive rates of financial return on VET were often limited or non-existent. Further, that training often made life harder for low paid workers by consuming time and money while raising unrealised expectations, particularly if that training 'merely "ticks the box"; is not associated with genuine learning; is of poor quality; is not integrated into work processes; and creates new money and time strains, without generating rewards, in terms of new skills or better pay or prospects' (Pocock et al, 2011, p. 7). For VET training to avoid leaving low paid workers with what Pocock et al. (2011) call 'shallow occupational ladders', particular pedagogical features were identified. These include 'flexible delivery (in time and place); appropriate use of E-learning and/or distance learning (taking account of literacy and numeracy skills, where necessary, and providing support); learning that includes provision of computing resources, where appropriate; training that is integrated into workplaces; and training that does not impose upon time at home' (p. 42). In particular, the study identified a strong correlation between low literacy, low wages and shallow occupational ladders (Pocock et al., 2011, p. 15).

Vocational Streams as an alternative

Training packages are made up of Units of Competency, which are grouped together to form qualifications according to the 'packaging

rules' that accompany each training package. Qualifications are commonly made up of 'core units'; that is, compulsory units, and a defined number of elective units chosen from an expansive list. The Community Services Training Package offers 62 possible electives. The qualifications are designed to be customisable to different delivery environments by assembling combinations of the elective units, but the final combination 'must contribute to a valid, industry-supported vocational outcome' (Skills IQ, 2015). Each Unit of Competency is made up of a set of demonstrable skills (elements and performance criteria), the conditions under which the skills can be fairly and rigorously assessed (range of assessment conditions), and the knowledge required to perform those skills (knowledge evidence).

Wheelahan, Buchanan, and Yu (2015) suggest that qualifications have several purposes, only one of which is an industry supported vocational outcome. The other two factors include progress to higher-level studies within the education system and social inclusion and mobility (p. 15). They identify vocational streams as a means of meeting all three of those qualification purposes, because vocational streams link learners to a broader range of potential occupations and they focus on the 'knowledge and skills underpinning tasks and roles' rather than simply performance of the tasks and roles (p. 20). These underpinning knowledge and skills, defined as 'productive capabilities' can allow the person to be adaptable and to make complex judgements at work, but also lay a foundation for further education and to navigate the labour market and society more broadly (p. 20). A broader range of knowledge and skills could arguably play an enhanced social inclusion role in social care work, beyond the social inclusion and mobility of workers, because social care involves making complex judgements directly impacting the wellbeing of vulnerable cohorts, namely, frail aged people and people with a disability.

Yu, Bretherton, and Buchanan (2013) identified two preconditions to the development of a vocational stream as the basis for workforce development. These were 1) links in terms of underpinning skills and knowledge, or 'commonalities in capability' and 2) the potential for commitment and cooperation across stakeholders, or social partners, on resolving issues such as skills shortages, defined as 'social partner readiness' (p. 7). In their assessment of the potential for vocational streams in a range of industries, Health and Social Care sat in an interesting space, with very high levels of commonalities in capability

and very low levels of social partner readiness (p. 8). The lack of social partner readiness was, in part, driven by the push by some stakeholders such as major health and social care employers (and resistance by bodies such as health care unions) to expand the scope of lower paid roles into work traditionally done by higher qualified workers in the face of the growing costs of health and social care (p. 15).

There was some evidence to suggest that the low level of 'social partner readiness' identified by Yu, Bretherton, and Buchanan (2013) might not apply to this program. Firstly, this case study focused on building a vocational stream across industries (disability, aged care, home and community care) that had similar industrial outcomes avoiding being caught up in some of the industrial arguments about deskilling and degrading of roles occurring across Health and Social Care (p. 15). Further, since 2013, the move towards so called 'person centred care' and the accompanying marketised models of delivery driven by the National Disability Insurance Scheme (NDIS) and the Commonwealth My Aged Care reforms have led to new ways of grouping work in the form of 'services' supplied to the newly created Aged Care and Disability 'market places'. These factors have reconfigured the industries, to some extent, around common skills and capabilities, allowing for VET that traverses a broader vocational stream than would have been hitherto possible.

The place of knowledge in VET

An important distinction between knowledge in VET and knowledge in the other sectors of education such as higher education and schools is that knowledge is subordinated to the performance and demonstration of skill in VET and is not graded. The national standards for training packages specifies that knowledge evidence must 'relate (s) directly to the performance criteria and/or range of conditions' (National Skills Standards Council 2012). The National Standards for Registered Training Organisations, which are used by the regulatory authority, the Australian Skills and Qualifications Authority (ASQA), to regulate assessment in VET specifies that to be compliant, 'assessment of knowledge and skills is integrated with their practical application' (ASQA, 2017).

The privileging of practice within VET has been identified as one of the things that makes it attractive to excluded learners, particularly those for

whom school based education was unsuccessful or not available (Pardy & Seddon, 2011). Pardy and Seddon (2011) articulate it thus; 'VET as a space of orientation affirms the value of being practically useful' (p. 62). Within the trial program, this view was apparent when students were asked to assist people with a disability attending an advocacy conference as part of a practical learning exercise. After the conference, one of their teachers observed that a particular group of young, immigrant, early school leavers, who were poor attenders in class and struggled with written assignments, excelled at the opportunity to display skills largely developed through extended family care-work. Teachers reported that they came early, worked through their lunch break, proactively offered assistance to attendees with a disability and stayed behind to reflect on the challenges and their achievements at the end of the day. Pardy and Seddon (2011) emphasise that entering or changing occupations is not easy for marginalised cohorts, something that is spoken of, at length, by the participants in the Stevens (2018) evaluation. They observe, 'That VET learning privileges practice is a strength for those who are 'excluded'; who must recognise themselves as learners first before they can imagine themselves into futures that rest on and value learning' (Pardy & Seddon, 2011, p. 63).

While the knowledge embedded in the practical acts of providing individual support to a person with a disability, is significant, and certainly, vastly underestimated in the public estimation, it is doubtful that it would be sufficient to allow workers to navigate, advocate for themselves and progress in the increasingly complex and challenging social care work environments. Hodge, Atkins, and Simons (2016, p. 238) refer to this additional knowledge requirement as the 'why of performance' that is, knowledge, which, by its nature, must sit outside competency based assessment to allow learners to make use of their performance of competency. Referring specifically to Indigenous students, Dreise (2014) uses the phrase 'learning, earning, yearning' to describe the need for practical skills acquisition to sit within a knowledge framework based on 'developing entrepreneurial mindsets, supporting personal agency and fostering creativity' in order for learners to be 'not simply consumers of learning, but producers of it'.

Some observers have identified that the subordination of knowledge to skills in VET in Australia and other Anglophone countries reproduces inequality rather than reducing it (Wheelahan, 2009; 2015; Wheelahan,

Moodie, & Buchanan, 2012; Young, 2007; Young & Muller, 2014) Drawing on Durkheim and Bernstein, Wheelahan (2015) defines the theoretical knowledge that exists in each field of practice as 'collective representations', which provide the means through which society reflects upon itself and considers alternative futures (p. 752). Within each occupation, collective representations form the basis and boundaries of debate. Without access to this knowledge, it is argued, workers struggle to exercise agency within an occupation, and in society more broadly (p. 752).

Hodge, Atkins, and Simons (2016) have suggested the identification and incorporation of 'threshold concepts' into VET. 'Threshold concepts', can be described as 'unique ways of seeing' within occupations that provide a 'threshold' to understanding a broader set of concepts (Meyer & Land, 2003; Meyer, 2016). There are epistemological priorities, it is argued, within all occupations, that are unlikely to exist as prior knowledge, and amongst these, some form a foundation and entry point to a broader range of concepts (Hodge, Atkins, & Simons, 2016).

Approaches to the case study

The objective of this case study is to document the process and identify the challenges associated with the implementation of a knowledge rich vocational stream, in order to review, affirm and strengthen thinking around vocational streams and the foregrounding of knowledge within the Australian vocational education and training system, particularly at the entry level and for disadvantaged cohorts.

Formal data collection for this case study took place between April and June 2019. Reviewed data includes the following records: steering group meetings, commissioned research papers, records of industry consultation, email correspondence between participants, notes from planning sessions, course evaluation reports, the program implementation guide and the course materials themselves. The approach to analysis was to logically link the data to a series of propositions, as outlined above and interpret the subsequent information (Miles, 1994).

As a participant in the co-design process and a member of the project team, the researcher's observations of the process also provide an insider perspective on the case study. While there are a variety of definitions of

insider-researchers, generally they can be described as those who choose to study a group to which they belong (Breen, 2007). Insider perspectives in exploratory case studies provide advantages and disadvantages in terms of access, familiarity and rapport. The primary advantage of insider perspectives in case study research is that insider researchers approach the case study with a body of knowledge, that would take an outsider a long time to acquire, including the informal, often invisible, institutional norms that guide practice (Unluer, 2012; Smyth & Holian, 2008). This research has an inductive and interpretive orientation used to arrive at a general understanding of the challenges of vocational education and training in an Australian context in 2019.

This case study approaches the data through the lens of recent research on knowledge in Australian VET and on vocational streams. A number of researchers, vocational education practitioners, industry experts and people with lived experience of disability and aged care took part in the project and each brought bodies of knowledge that informed the process and the final products. This research does not attempt to explore all these perspectives. For example, ideas about co-design and co-production by system users featured heavily in documentation around the project (Dorst, 2011; Sanders & Stappers, 2014). Future research into how the project met the aspiration to include people with lived experience as co-designers of complex systems would yield insights that are unable to be covered in this case study. Similarly, the role of teachers in Australian VET curriculum development is touched on in this study, but worthy of greater attention.

Towards a knowledge rich foundation qualification

The formal curriculum development project at the heart of this case study began in January 2018 and concluded in April 2019. The curriculum team were committed to developing a program that provided participants with a strong foundation of skills and knowledge from which to build a career in social services including following linear pathways within their chosen industries, and diagonal pathways into adjacent fields such as family services or community development. It was hoped that these additional skills and knowledge would allow graduates to work across fields in locations with thin markets, manage life transitions and interruptions and to advocate for themselves, the vulnerable people they work with, and the industry more broadly. They

were acutely aware of the traps awaiting learners from marginalised cohorts from training leading to low paid, precarious work with limited labour mobility. This is partly outlined in the introductory section of the Program Implementation Guide for the completed curriculum:

> *The goal of the program is to prepare learners for a broad range of potential careers and pathways within social services including aged care, family support and disability support, with the aim of building the NDIS workforce specifically, and the sector more generally (Program Implementation Guide, p. 5).*

The project had a number of distinct phases. In order to ensure that knowledge was foregrounded, it began with the development of 5 knowledge reviews covering 5 key areas that underpin high quality social support work. The knowledge reviews were supplemented by co-design planning sessions with users of Aged Care and Disability Support Services, employers and Alumni from the 2017 course. Only then, was the curriculum mapped back to the training package qualification and the gaps filled with additional learning and assessment activities.

The resulting curriculum followed a blended learning model that included some key features. First, industry engagement and inclusion of service users began from the first weeks and work placement in a variety of workplace types was spread throughout the program so that the transition into the industry was scaffolded and students experienced the widest possible array of jobs. An online learning component was built around 24 short videos featuring workers and people with lived experience of aged care or disability support services. The videos were the primary introduction to the core knowledge areas, allowing students to engage with complex ideas without having to have high levels of print literacy. The third component was classroom based activities that included revising the knowledge content, debriefing students on their workplace based experiences, hearing from system users and engaging in practical learning activities. The online learning components were designed to be supported in class for the first six weeks of the program to ensure that students have adequate digital literacy to succeed before being expected to undertake this online learning at home, the workplace or the library, taking into account the competing challenges identified by Pocock et al. (2011) for flexibility around work and family as well as general literacy and digital literacy support.

The five knowledge areas were settled upon through consultation with social studies academic experts and vocational education teachers. Three of the knowledge areas, 1) Human Rights Led Practice, 2) Power and Abuse and 3) Working with Diverse people, appeared in some form in the Knowledge Evidence of Units of Competency. In the course, however, teachers reported that the emphasis by regulatory auditors on the practical application of skills, the crowded list of Knowledge Evidence topics with limited explanation, and the lack of time for teachers to develop assessment tasks and resources meant that the Knowledge Evidence was often dealt with in a perfunctory, or 'tick a box' way. For example, Human Rights related content appears amongst a list of up to 20 major items in 7 of the 15 units of competency that make up the qualification. It is not that knowledge of human rights is absent from the training package, rather, teachers reported that a crowded, atomised training package meant that teaching tended to 'skim over the top', focusing on the instruments of human rights rather than extrapolating how these instruments inform laws, policies and frameworks which then impact practice. Most importantly, teachers reported that they lacked the time to construct classroom activities to explore how a worker can engage in constant reflective practice about human rights when dealing with vulnerable people.

A fourth knowledge area, Enabling Technology, was almost entirely absent from the training package qualification. Disability experts identified that the NDIS has a strong focus on using technology to eliminate barriers to participation for people with a range of disabilities, which is changing practice in the sector. Indeed, it was identified that advances in technology are challenging the very notions of ability and disability (Ladner, 2011). Being able to support a client's technology use has a profound impact on their quality of life, yet it is possible to exit the current Certificate 3 program with little knowledge of the range of assistive technologies opening up new possibilities to people with a disability. The complete absence of this powerful and empowering knowledge speaks to one of the major criticisms of Training Packages; that is, that they are reactive; starting from the employer's perspective of a job in the present, then taking years for the state training apparatus to turn that point in time into a training package, a process, at odds with the rapidly changing nature of work (Wheelahan & Carter, 2001).

The fifth, and arguably, the most complex knowledge area was Ethics of Care, a normative ethical theory that emphasises mutuality and

solidarity in providing care across the lifespan and across societies (Barnes, 2012; Held, 2006; Noddings, 2013) Wheelahan (2015) observes:

> *Each occupation has its own (big and small) challenges about the nature of practice, ethical issues and dilemmas, and different perspectives about how practice and their field should be developed in future. If students are to participate in these debates, they need to have access to, and be able to use, the specialized knowledge that underpins practice in their occupational field (Wheelahan, 2015, p. 752).*

Within social care, the major challenges to the nature of practice are arguably being driven by British and American feminist writing on Ethics of Care (Held, 2006; Barnes, 2012; Noddings, 2013). Rather than there being one right answer or approach, as Competency Based Training would suggest, Ethics of Care theorists present a challenge to the dominant Human Rights approach in social care, critiquing it as deriving from individualistic and masculine world views (Noddings, 2013). While the broader debate is complex, having access to the most basic principles of Ethics of Care, such as the gendered nature of care work, the devaluing of care in neo-liberal societies and the idea that 'care' can be both oppressive and supportive, gives entry level workers a framework to think about and advocate for their work, and the people for whom they provide support. It also provides them with a basis for making ethical decisions in the great many situations in care work, in which one client's human rights intersect with another's (Barnes, 2012).

Discussion

Supporters of training packages often make a distinction between the training package components and the 'curriculum', suggesting that how they structure the learning that leads to the outcomes in a training package is entirely up to teachers and coordinators and eminently adaptable. However, this case study suggests that while technically possible, the regulatory, cost and practical barriers involved make this unrealistic.

The time and expertise required to cluster underpinning knowledge and performance criteria across units to avoid the repetition and narrowness identified in the Stevens evaluation was significant. Once completed, the assessment tasks were checked by a VET compliance expert and a

consultant who also works as a compliance auditor to assuage teacher and administrator concerns that future auditors, used to the unit by unit 'tick a box' approach common in VET practice would not recognise the resulting assessment tasks as compliant. The first cluster of the curriculum included an Assessment Mapping spreadsheet with 11 columns and 92 lines of references, a process repeated four times for the entire curriculum. Assessment Guides read like legal documents with lists of coded references under each task such as KE -CCS3 referring to the Knowledge Evidence from the unit, CHCCCS021 – Respond to suspected abuse. At one of the steering group meetings, one project participant, a teacher and administrator with decades of VET experience observed; 'Ten years ago if you had asked me to write an assessment task, I could bring out a piece of paper and do it. Now I would struggle to write one that would pass audit'.

Funding barriers also impeded the production of a vocational stream. In the state of Victoria, where this case study is based, the funding provided by the Victorian state government for vocational qualifications only covers one of the Ageing or Disability specialisations in the Certificate 3 in Individual Support. This is consistent with the approach of some state governments who aim to incentivise learners to move up a qualification ladder rather than funding them to expand and broaden their skills at the same qualification level. In practice this means either students are charged fee for service rates for additional streams or the provider is expected to absorb these additional costs of delivery. As a result, few learners exit with a qualification with multiple specialisations that allows them to work across social support, despite the training package being structured in a way that allows this (NCVER, 2019). In this instance, in order to trial the concept, the University absorbed the costs of the additional streams and offered scholarships to target groups to make the whole program completely fee free and cover materials and incidentals, a practice that is unlikely to survive beyond the trial period in the current financially constrained VET funding environment.

The limitations on knowledge in the training package became obvious when the learning activities related to the five knowledge areas were developed, particularly the two areas, Ethics of Care and Enabling Technology that had the least connection to the training package. For Enabling Technology, instructional designers could have neatly mapped the unit to an additional elective unit imported from the Business

Services training package; a practice allowable under the training package rules. However, this unit would be in excess of that funded by the state, meaning that providers would only be able to offer it as an add-on fee for service component, something low paid entry level workers would be unlikely to afford. The alternative was to map the content against the Knowledge Evidence of a great number of Units of Competency and record this mapping; a complex and time consuming exercise outside the scope of most teachers' work.

A disconnect between the supposed flexibility of the training package and the practicalities of making use of this flexibility was again highlighted by the Power and Abuse knowledge area. The content of this knowledge area mapped neatly to one unit of the training package, CHCCCS021 Respond to Suspected Abuse, (albeit, it went deeper than the unit requirements to 'recognise', 'respond' and 'report' abuse, to look at the underlying drivers of abuse such as ableism, ageism and social isolation). However, despite the importance of this content to care work, this unit is one of the 62 electives rather than a core unit. Again, this meant that the unit would sit outside the funding provided by the Victorian government, and its inclusion would require entry level workers to pay fee for service to access it or providers would have to absorb the costs. Also, to be compliant with National Standards around training and assessment, individual providers would have to show evidence that they had industry endorsement that the qualification with this additional unit would 'contribute to a valid, industry-supported vocational outcome' (Skills IQ, 2015), and enrol learners in it separately to the rest of the qualification, both cumbersome administrative processes. The team felt so strongly that this unit had to be included intact and not obscured through a complex mapping process, that they built its inclusion into the curriculum and added the following caveat to the Program Implementation Guide:

> *RTOs needs to be aware this program includes 15 units and if your organisation chooses to deliver the entire clusters, as developed in this program, they will need to make enquiries regarding funding process because these clusters include two additional units (beyond those required by the training package) (p 2).*

A further difficulty arose with the assessment of the knowledge areas. The review by the first compliance consultant identified that the

curriculum was breaching the Standards for RTO's rules around over assessment because the curriculum was assessing knowledge not explicitly contained in the Unit of Competency. Again, instructional designers undertook a technically complex process of creating a mapping document that split the online assessment, labelling half of the assessment formative the other half summative, so that the additional assessment content could be disguised as scaffolding the endorsed knowledge in the training package. The non-endorsed formative component also had to be made 'optional' to be compliant. A short micro-credential was offered to learners who undertook this additional assessment. Again, a technically complex process, outside the expertise of most teachers, and only possible because the curriculum build was externally funded.

VET reform since the early 90s has privileged situated learning in the workplace as the ideal. As a result, the range and conditions of units of competency in training packages increasingly specify that assessment must occur 'on the job'. The amount of time required for each assessment event and the practical challenges of assessing each individual student in situ leaves limited time and resources to apply to the practice of skills in preparation for workforce placement and reflection on practice afterwards, aside from the challenges of finding enough employers willing to host learners on extensive placements. This situation has been made more challenging by NDIS and My Aged Care driven imperatives to fund individualised services rather than block-fund large community services organisations. In the post NDIS and My Aged Care worlds, the 'employer' is likely to be an individual and the 'workplace' a home or the community. Placing students for lengthy periods of time within these work environments presents an ongoing challenge. Within the case study, the disconnect between the aspirations of the training package for on the job learning and assessment and the practicalities of providing so many practical placement hours created tensions between instructional designers who worked to the rules of the training package and the teachers and coordinators who had to implement the program. The issue of how training packages have led to deskilling and alienation of teachers, identified in the literature (Hodge, 2016; Wheelahan & Carter, 2001), was evident throughout this case study and is worthy of further research.

Conclusion

This case study suggests that the Australian VET system based around national training package qualifications is ill equipped to offer students the knowledge required to navigate increasingly complex work in emerging labour markets. While teaching and learning within Australian VET might, in theory, address other material drawn from the professional experiences of teachers, threshold concepts identified through research, or the lived experiences of service users, the rigidity and complexity of training packages and the regulatory regimes that surround them tend to restrict teaching and assessment to narrow, atomised, repetitive components of the relevant training package. Making a meaningful, knowledge-rich vocational stream program within the training package system was found to be enormously complex and unsustainable outside a generously funded one-off pilot program.

The case study also highlights the illusion of choice and flexibility of training package qualifications. Training packages present as vast menus from which providers can maintain national consistency while meeting the specific needs of diverse industries and applying their own specialist expertise. This case study suggests that choices are limited by available funding, an administratively burdensome regulatory approach and by the complexity of the packages themselves. National data suggests that a great many training package qualifications have zero or minimal enrolments (Misko & Korbel, 2016). This research would suggest that within these qualifications, training organisations and teachers are steered towards standard unit choices and that a great many of the elective units are unlikely to be ever elected.

While this case study is confined to one qualification level in one industry, the projected job growth in this industry and the fact that it continues to add entry level jobs requiring a Certificate 3 qualification, at a time when other industries are shedding them, makes it an ideal test case for whether Australian VET can live up to its aspiration to provide an entry point to the labour market for excluded groups, and pathways into productive and meaningful careers. If VET courses and qualifications don't facilitate labour mobility and career paths in Australia's fastest growing industry, if they provide limited or no return on investment and 'shallow occupational ladders' for low wage workers, if they are boring and repetitive and if they leave vulnerable frail aged and disabled members of the community to be supported by narrowly skilled

workers with few other options, then these are significant failings that should prompt renewed thought on the fit for purpose of Australian VET.

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Transformative learning through mindfulness: Exploring the mechanism of change

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Making appropriate perspective transformations as we age is necessary to meet the demands of the rapidly changing conditions within our world. Accordingly, there has been a growing interest in the role of mindfulness in enabling transformations. Still, how mindfulness may facilitate perspective transformations is not well understood. The present paper draws from empirical evidence from psychology and cognitive science to discuss the theoretical possibility that mindfulness may facilitate perspective transformations. A theoretical model is presented that depicts an incremental transformative learning process that is facilitated through mindfulness. Mindfulness affords the adult enhanced attention to their thoughts, feelings, and sensations as they arise in the present moment experience. This metacognitive awareness may moderate the expression of motivational disposition for the present moment behaviour, enabling a more objective assessment of the conditions of the situation. Nonetheless, in accordance with transformative learning theory, an adult would have to become critically aware of and analyse the assumptions that underlie the reasons why they experience as they do in order to convert behaviour change to perspective transformation. Further empirical studies are

necessary to test this assumption of the theoretical model presented in the present paper.

Keywords: *Adult learning, Jack Mezirow, transformative learning theory, mindfulness, perspective transformation, lifelong learning*

Introduction

Understanding how to realise the potential of humans and our sustainable development consists of considering human development from diverse perspectives (Cunningham, 2019; Duke, 2018). This paper addresses a timely issue concerning the need to understand how adults can meet the demands of their ever-changing world through perspective transformations and how mindfulness might facilitate self-directed and appropriate transformational change: a fundamental part of a process of lifelong learning and our continued development (cf. Brown, 2018).

Modern day environmental conditions are rather turbulent and perspective transformations are distinctly advantageous for individuals and societies: there is an ever-growing need for persons who can adapt to change and ambiguity and enact transformations in their meaning perspectives in accordance with their changeable environments (e.g. Longmore, Grant, & Golnaraghi, 2017; Morris, 2018, 2019a, b). The process of transformation is a learning process that involves change in meaning perspectives, especially through everyday informal life experience, where there is an interaction between the learner and their social environment (cf. Akinsooto & Akpomuje, 2018), which includes e-learning experiences (e.g. de Palo, Limone, Monacis, Ceglie, & Sinatra, 2018). Gould (1978) summarised the result of not undertaking transformations: people move sideways in their lives without significant change or growth.

The process of transformation of meaning perspectives has been defined as "the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience as a guide to future action" (Mezirow, 2012, p. 74). An alternative definition was given by Cranton and Wright (2008): "a process by which individuals engage in critical self-reflection that results in a deep shift in perspective toward a more open, permeable, and better justified way of seeing themselves

and the world around them" (pp. 33–34). The transformative learning process, which necessitates that the adult becomes critically aware of and analyses the assumptions that underlie the reasons why they experience as they do, has been positioned as fundamental for human development in our rapidly changing world (Ardelt & Grunwald, 2018). In this regard, in accordance with transformative learning theory, the transformation process can be either epochal (sudden) or incremental (refer to Mezirow, 2012).

Nonetheless, Klein (2018) discussed how "distractions" within contemporary living might detract persons from the mindful awareness needed to enable transformations. In this respect, in recent years there has been an exponential growth in interest in mindfulness (Aldwin, 2015; Hyland, 2017; Miller, 2015; Roeser, 2013). Mindfulness in the present paper is defined in accordance with contemporary psychology as a state or mode of paying particular attention to the present moment experience. Recent research in the field has included understanding how mindfulness may facilitate transformations (e.g. de Angelis, 2018; Hussein, Bedasa, & Mengistu, 2019; Klatt, 2017; Klein, 2018; Lear, 2017) and how mindfulness might be realised in formal educational settings (e.g. Carboni, Roach, & Fredrick, 2013; Frank, Jennings, & Greenberg, 2013; Singh, Lancioni, Winton, Karazsia, & Singh, 2013). In reference to the work of Boyd and Myers (1988), Lear (2017) made the connection between the role of mindfulness and discernment. She explained, "Mindfulness… allows us to slow down and attend to the body, the voices, and senses within. Such knowledge is used spontaneously and intuitively; we become more flexible and open to change" (p. 282).

Still, how mindfulness may facilitate perspective transformations is not well understood. In this paper, a review of the process of perspective transformation is presented, followed by an analysis of the potential of mindfulness for facilitating meaning perspective transformations.

Transformative learning theory – our frames of reference

Frames of reference

In accordance with transformative learning theory, a phenomenon of adulthood is that an adult's biography can take a stronghold in determining how he or she perceives themselves and the world around

them (Arnold, 2017; Varela, 1984; Watzlawick, 1984). Consequently, an adult can "get caught" in their personal history and practice reliving it (Mezirow, 1978, 1991, 2009). Thus, irrespective of the changing social contextual conditions within the present moment life-situation of the adult, he or she may display a tendency to, habitually, repeat patterns in their behaviour, which includes ways of perceiving, thinking, judging, feeling, and acting (Arnold, 2017). However, as outlined in the introduction section of this paper, the process of routinely applying old frames of reference to new life situations could be distinctly disadvantageous for an adult – especially in the face of rapidly changing social contextual conditions. Specifically, it is possible that an adult's behaviour is no longer fitting, or "as fitting", as it could be in the new present moment life situation (cf. Morris, 2019a).

Examining transformative learning theory through a socio-constructivist perspective, Cranton and Wright (2008) identified that an adult's experiences from culture, community, and family determine their meaning perspectives in which they frame their lives. They discussed that the process of socialisation fosters "habits of the mind" (p. 34) – or frames of reference: an adult's meaning perspectives through which new experience is construed. Moreover, Mezirow (1991) exampled the "formative learning [that] occurs in childhood through sociali[s] ation (informal or tacit learning of norms from parents, friends, and mentors that allows us to fit into society) and through our schooling" (p. 1). He identified that meaning perspectives are, in this regard, "uncritically assimilated" (p. 4) – strengthened by exposure to similar socialised experiences that accommodate, but then validate the "truth" or "fittingness" of the meanings that we make of experience (cf. Piaget, 1981). In such circumstances, meaning-making of experience is uncritically construed and as a consequence the frames of reference become habits of expectations (cf. Morris, 2019c, 2020; Mezirow, 1981, 1991).

In this regard, in accordance with constructivist theory, two implicit cognitive processes, assimilation and accommodation, work reciprocally in the process of meaning-making (Piaget, 1981; Rogers, 1969). Assimilation concerns how new perceptual information is "fitted" into established knowledge structures. Accommodation refers to the process whereby existing knowledge structures are modified by experience. When an attempt is made to learn something new, validation is automatically and first sought; whereby, meaning is construed via the employment of

established knowledge structures, or meaning schemes (Varela, 1984; Watzlawick, 1984). In this regard, an adult's frames of reference consist of meaning schemes, or "habits of expectations… which serve as selective codes governing perception and comprehension" (Mezirow, 1991, p. 37) and are "made up of specific knowledge, beliefs, value judgments, and feelings that constitute interpretations of experience" (ibid, pp. 5–6). Thus, because an adult's frames of reference are determined by their personal biography, frames of reference will likely differentiate between adults, but hold some similarities that are gained through social transactions. However, from the perspective of transformative learning theory, without gaining a critical awareness of one's frames of reference and the assumptions that underlie these meaning perspectives, that determine how an adult "pattern[s]" his or her life (Mezirow, 1978, p. 101), an adult may display repetitive habitual patterns of perceiving, thinking, judging, feeling, and acting (Arnold, 2017).

Moreover, it is important to point out that adult learning literature on transformative learning theory and indeed the major adult learning theories generally position with a constructivist learning perspective (Merriam, Caffarella, & Baumgartner, 2007). However, the present paper draws on recent empirical evidence concerning what is known about cognition and the human perceptual process – through a cognitivist lens – which provides a differential way of viewing the process of transformative learning and how mindfulness could feasibly facilitate the process.

Perceptual processes

In perceptual terms, according to cognitivist theory, an adult's frames of reference concern "top-down processes" that utilise past knowledge structures to make sense of the information acquired in the present moment (Gilbert & Sigman, 2007; Kinchla & Wolfe, 1979). One key advantage of top-down processes is that they enable a person to predict future, up and coming, perceptual information, which affords us with the ability to act and react very quickly. Specifically, it is thought that temporal and spatial patterns of neural activity within the neocortex permits this prediction (George & Hawkins, 2005, 2009). Thus, the adult brain is in a constant state of anticipating future perceptual inputs via monitoring spatial and temporal patterns of the information input (cf. Zacks, Speer, Swallow, Braver, & Reynolds, 2007). This

cognitive activity happens subconsciously, or implicitly, representing an automatic process that happens without conscious intervention (cf. George & Hawkins, 2005, 2009; Wilson, 2002).

In this respect, Gilbert and Sigman (2007) noted that it is becoming increasingly clear through empirical evidence that top-down processes influence even the earliest stages of sensory processing, including the regulation of attention. Consequently, what is particularly important in respect of adult learning is that an adult's frames of reference will guide what he or she perceives and how they make-meaning of a present moment experience.

Motivational dispositions

At the same time, a distinct disadvantage of top-down influence is its "unconscious" operational nature that guides implicit motivational disposition for behaviour (Levesque & Brown, 2007; Wilson, 2002). One possible consequence is the automatisation of day-to-day behaviour driven by implicit motivational disposition (Levesque & Brown, 2007; Wilson, 2002), where an adult's behaviour is driven by their predetermined frames of reference that are habitually drawn upon without conscious intervention. Top-down influence, represented by implicit motivational disposition, is echoed in patterns of perceiving, thinking, judging, feeling, and acting that tend to repeat themselves (Arnold, 2017; Mezirow, 1991). Subsequently, without proactive intervention, it is possible that "internal control" over meaning-making of experience is not fully realised (Gilbert & Sigman, 2007; Varela, 1984; Wilson, 2002). This idea was depicted in the words of James (1907) that "[c]ompared with what we ought to be, we are only half awake" (p. 322). In sum, top down influence appears to be responsible, at least in part, for the phenomenon of an adult's nature of holding onto certainty, where an adult might not habitually tend toward transformations across the course of their life.

The transformation process

In accordance with transformative learning theory, the transformation process involves gaining a critical awareness of one's cultural and psychological assumptions regarding how we see our relationships and ourselves (Mezirow, 1978). The process of transformation is concerned

principally with a change of one's frames of reference, or in other words, "a movement through time of reformulating reified structures of meaning by reconstructing dominant narratives" (Mezirow, 2012, p. 84). In a review of Mezirow's conceptualisation of transformative learning theory, Calleja (2014) summarised that the transformation process "is about becoming aware of one's own and others' tacit assumptions and expectations, and assessing their relevance for making an interpretation" (p. 119).

Through their seminal empirical study, Mezirow and Marsick (1978) proposed ten phases of perspective transformation (refer to Mezirow, 1991): (1) A disorienting dilemma; (2) self-examination; (3) critical assessment of assumptions; (4) recognition; (5) exploration; (6) planning; (7) knowledge and skill acquisition; (8) testing; (9) competence and confidence building in new roles and relationships; and, (10) application of revised meaning perspectives. More recently, other dimensions of perspective transformations have been addressed, such as contextual, spiritual, and relational considerations (Cranton & Taylor, 2012).

Gaining a critical awareness of our formulated meaning perspectives, and how they were formulated, is key to the process of perspective transformation; this involves an adult critically reflecting on (1) the process and conditions of their experiencing, and (2) the reasons why they experience as they do (Mezirow, 1991). Mezirow (1991, p. 5) discussed that "[w]e allow our meaning system to diminish our awareness of how things really are in order to avoid anxiety, creating a zone of blocked attention and self-deception". Moreover, nonetheless, "[o]vercoming limited, distorted, and arbitrarily selective modes of perception and cognition through reflection on assumptions that formerly have been accepted uncritically is central to development in adulthood" (ibid). Ultimately, perspective transformation,

> *is about more than becoming aware of one's own awareness. Its goal is to help learners move from a simple awareness of their experiencing to an awareness of the conditions of their experiencing (how they are perceiving, thinking, judging, feeling, acting – a reflection on process) and beyond this an awareness of the reasons why they experience as they do and to action based upon these insights. (Mezirow, 1991, p. 197)*

In this regard, the dynamics of perspective transformation should be considered (cf. Mezirow, 1978). In particular, that the transformation process consists of sequential restructuring of one's frames of reference that determine how he or she makes meaning of the present moment experience. Mezirow (ibid) referred to the work of Bruner (1970) who used the term "decentration", which describes the process of moving "through successive transformations toward analy[s]ing things from a perspective increasingly removed from one's personal and local perspective" (Mezirow, 1978, p. 104). Decentration involves the ability to pay attention to multiple conditions of the present moment experience, rather than being confined to or being biased in attending toward single or certain conditions – restrained by frames of reference that provide a boundary for making meaning of the present moment experience. In this respect, Kegan (2009) made the key distinction that the process of transformation is not concerned with what information we know, but rather our way of knowing; highlighting the point that over time the ways we understand and construct experience can become more complex. In the following section, the concept of mindfulness is defined and discussed in respect of how mindfulness is a mode characterised by vividness and clarity toward the present moment experience and how mindfulness can facilitate transformations.

Mindfulness

Mindfulness has its roots in Buddhism and other contemplative traditions and is most commonly defined as the state of being awake to what is taking place in the present moment experience (Kabat-Zinn, 1994, 2003). In this regard, Kabat-Zinn (1990) wrote,

> *Moments of mindfulness are moments of peace and stillness, even in the midst of activity. . . It takes a while to get comfortable with the richness of allowing yourself to just be with your own mind. It's a little like meeting an old friend for the first time in years. (p. 60)*

In the forthcoming sections, conceptual links are made between transformative learning theory and mindfulness. Specifically, it seems feasible that mindfulness may facilitate an incremental transformation process, as mindfulness enables metacognitive awareness of one's perceiving, thinking, judging, feeling, and acting relative to the

conditions of their experience (Baer, 2003; Brown & Ryan, 2003; Keng, Smoski, & Robins, 2011). The role of mindfulness as a facilitator of transformative learning appears feasible given that the transformative learning process demands "generating opinions and interpretations that are more justified" (Mezirow, 2012, p. 85). Importantly, only through mindful self-examination can one begin to generate and appreciate alternative options and interpretations (Arnold, 2017).

Although there are considerable similarities to the meaning of mindfulness in Buddhism and other contemplative traditions, mindfulness in contemporary psychology has a unique definition. The most agreed upon conceptualisation of mindfulness in contemporary psychology is a two-dimensional view. In this respect, Bishop et al. (2004) proposed a two-factor model, defining mindfulness as a mode of "awareness and responding skilfully to mental processes that contribute to emotional distress and maladaptive behaviour" (p. 230). The first factor concerns a particular mode of attention that focuses on the present moment experience. The second factor concerns emotional regulation.

Attention

In mindfulness, a particular state of awareness is gained that enables fuller attention to sensations, thoughts, and feelings as they arise. In this regard, Bishop et al. (2004) explained,

> *Mindfulness begins by bringing awareness to current experience – observing and attending to the changing field of thoughts, feelings, and sensations from moment to moment – by regulating the focus of attention. This leads to a feeling of being very alert to what is occurring in the here-and-now. It is often described as a feeling of being fully present and alive in the moment. (p. 232)*

Mindfulness is characterised by vividness and clarity toward an experience (Brown & Ryan, 2003). Sauer et al. (2013) referred to a "vivid awareness" of sensory and mental processes within the present moment experience. Kabat-Zinn (1994) discussed that mindfulness refers to the particular way in which attention is payed: "on purpose, in the present moment, and nonjudgmentally" (p. 4) and he later defined mindfulness

as "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (Kabat-Zinn, 2003, p. 145).

Rather, a lack of mindfulness is characterised by rumination and absorption in the past and overly fantasising and worrying about possibilities in the future and, thus, taking the person away from attending fully to the experience of the present moment (Brown & Ryan, 2003). Importantly, a lack of mindfulness leads to the potentiation and enactment of automatic and habitual behaviour (Levesque & Brown, 2007).

Acceptance

When considering the second dimension, emotional regulation, acceptance appears to be the starting point. In this regard, Hayes et al. (1999) explained, "[e]tymologically, 'acceptance' derives from a word meaning 'to take or receive what is offered'" (p. 34). Therefore, mindfulness is a mode that encourages a stance of acceptance. Through this active process, careful notice is taken of each thought, feeling, and sensation as they arise in a deliberate and non-judgemental way (Bishop et al., 2004; Hayes et al., 1999).

Mindfulness is a mode indicative of paying attention to and acknowledging each thought, feeling, and sensation: becoming familiar with one's subconscious patterns. Once a thought, feeling, or sensation is acknowledged, during the mode of mindfulness the person directs attention immediately and deliberately back to the present moment (Baer, 2003; Davidson et al., 2003). Mindfulness thus involves the observation of one's sensations, thoughts, and emotions: not to evaluate them in the present moment experience, but rather to note their impermanence and simply to observe whatever is happening in each moment (cf. Baer, 2003).

The skill of mindfulness

There is sufficient empirical evidence that the skill of mindfulness can be developed with practice (e.g. Davidson et al., 2003; Shapiro, Oman, Thoresen, Plante, & Flinders, 2008). This includes the skill in sustaining the mindfulness mode. Bishop et al. (2004) positioned mindfulness as more of a state than a trait and explained, as mindfulness can be purposely initiated and sustained but when no such attention is regulated in this way mindfulness will cease. Although mindfulness is

a skill that can be developed through practice, it is also apparent that genetic disposition has a central role of influence upon tendency toward this state-like mode.

In this respect, Brown and Ryan (2003) proposed that personality characteristics of the individual play a key role. The authors concluded that although the capacity for mindfulness is a given (a) there are individual differences in propensity or willingness toward mindfulness, and (b) mindful capacity varies within persons. In sum, a combination of genetic disposition and mindful training may thus determine skill and inclination toward mindfulness.

Mindfulness as a facilitator of perspective transformations

Since the 1970s, empirical evidence has been gathering regarding how mindfulness can act as a positive self-regulating process. For instance, Shapiro, Carlson, Astin, and Freedman (2006) made the conceptual links between attention, attitude, and intention. They suggested that these axioms of mindfulness are not separate stages, but are interwoven aspects of the process and occur simultaneously. The authors made the hypothesis that these three axioms account for a large proportion of variance in an individual's transformations: attention that is open and non-judgemental leads to "reperceiving" – a shift in perspective – viewed as a "meta-mechanism of action" (p. 377).

Building upon this perspective, in an innovative study Levesque and Brown (2007) conceptualised mindfulness as a pre-response "gatekeeper". The gatekeeper acts to moderate the relationship between implicit motivational processes and behaviour. Their empirical research shows that mindful individuals are more likely to modify their expression of their implicit motivational orientations when desirable. Moreover, Karelaia and Reb (2015) explained that mindfulness may increase the number and quality of options being considered by a person. In this regard, Teasdale and colleagues (Teasdale, 1999; Teasdale et al., 2002) described this phenomenon as metacognitive insight: "actually *experiencing* thoughts as thoughts" (that is, as events in the mind rather than as direct readouts on reality) in the moment they occur" (Teasdale et al., 2002, p. 286, emphasis in original).

Furthermore, Kabat-Zinn (1990) suggested that mindfulness leads to the understanding that conditioned responses are what they are –

conditioned responses – rather than an accurate reflection of truth or reality. Linehan (1987) concurred with this underlying assumption, that thoughts, feelings, and sensations are not always accurate reflections of "reality". Importantly, metacognitive insight may moderate "automatic" behavioural patterns, which would otherwise occur in the absence of any conscious involvement or intervention, triggered by cues within the environment (cf. Baer, 2003; Bargh, Chen, & Burrows, 1996; Bishop et al., 2004). In this respect, Baer (2003) pointed out that,

> *Training in self-directed attention can result in sustained exposure to sensations, thoughts, and emotions, resulting in desensiti[s]ation of conditioned responses and reduction of avoidance behaviour… cognitive change appears to result from viewing one's thoughts as temporary phenomena without inherent worth or meaning, rather than as necessarily accurate reflections of reality, health, adjustment, or worthiness. (p. 130)*

Moreover, Robins, Keng, Ekblad, and Brantley (2012) elaborated further on this explanation and described mindfulness as an "additional" learning process, or higher order process. They explained that, "[o]ver time, individuals might develop greater insight into their habitual tendencies of thinking, which then allows them to alter negative patterns of thinking and/or react differently to them" (p. 118).

In this regard, there is empirical evidence from various clinical studies which shows that mindfulness training can assist adults to "step-out" of unfavourable patterns of behaviour. Examples include, but are not limited to, reducing the ruminative patterns associated with anxiety and depression (Hofmann, Sawyer, Witt, & Oh, 2010), the reduction of binge eating (Kristeller & Hallett, 1999; Mantzios & Wilson, 2015), and a range of other health benefits (refer to Eberth & Sedlmeier, 2012; Grossman, Niemann, Schmidt, & Walach, 2004 for reviews).

For instance, in a meta-analytical review of empirical studies that examined the effect of mindfulness-based interventions upon a range of health conditions (39 studies, N = 1,140 in total) Hofmann et al. (2010) concluded that mindfulness-based interventions are promising, in particular, for treating anxiety and mood problems in clinical populations (with effect sizes of 0.97 and 0.95 [Hedges' g] for improving anxiety and mood symptoms, respectively). However, van der Velden et al. (2015) pointed out, in their systematic review of empirical mindfulness-based intervention studies with

clinical depressive populations, that little is known about precisely *how* such mindfulness-based interventions work. They further discussed that research that assists to understand the mechanisms of change, especially regarding how to achieve long-term change, could inform our scientific understanding of the processes leading to therapeutic change; which could in turn help therapists and treatment developers to improve patient treatments, especially treatments that lead to long-term transformations.

In this regard, scholars have considered that mindfulness may function as an "additional" learning process (cf. Robins, Keng, Ekblad, & Brantley, 2012), but, to date, not as a *transformative learning* process. In this regard, it is important to point out that considering the change process as one of "transformative learning" rather than just one of "learning" seems fundamental, because transformative learning is associated with deep, meaningful, and *long-term* perspective transformation (rather than, perhaps, short-term behaviour change). The present paper is therefore novel in this respect and presents a theoretical model (cf. Figure 1), grounded from studies in psychological, cognitive, and adult learning science domains, which provides a new direction for further empirical investigations.

Contributions to transformative learning theory

Based on the discussion above, Figure 1 depicts a summary of an incremental transformative learning process that is facilitated through mindfulness. A key assumption of the model is that it does not intend to represent all forms of transformative learning, but rather that mindfulness is one potential facilitator of perspective transformations in certain situations. The model is now discussed in further detail.

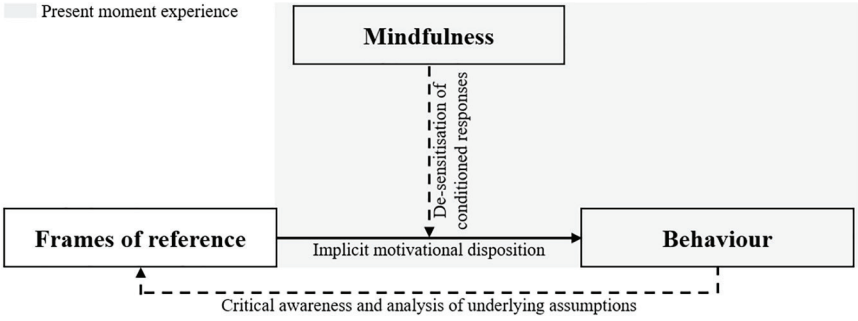

Figure 1. The Incremental Transformative Learning Process Through Mindfulness

Present moment experience

In terms of transformative learning theory, one's frames of reference act to govern perception and comprehension by providing implicit motivational disposition for his or her present moment behaviour (Mezirow, 1978, 1991, 2012). These frames of reference may represent "limited, distorted, and arbitrarily selective modes of perception and cognition" (Mezirow, 1991, p. 5). In this respect, Figure 1 shows that an adult's frames of reference act as a top-down influence in an "unconscious" operational nature and guide one's implicit motivational disposition for behaviour.

However, in the present paper, I have discussed empirical studies that suggest that the mode of mindfulness affords the adult enhanced attention to their thoughts, feelings, and sensations as they arise in the present moment experience – metacognitive awareness of the conditions of their frames of reference. This metacognitive awareness may moderate the expression of motivational disposition for the present moment behaviour, termed desensitisation of conditioned responses (Figure 1): enabling a more objective assessment of the conditions of the present moment situation. Because mindfulness is defined and characterised by "bringing a sense of objectivity" to the present moment experience it seems feasible that the mindfulness mode can assist the transformative learning process in terms of encouraging decentration, which involves "analy[s]ing things from a perspective increasingly removed from one's personal and local perspective" (Mezirow, 1978, p. 104).

The key benefit for the adult in this regard is that mindful individuals increase the number and quality of options being considered and consequently adults are more likely to modify their expression of their implicit motivational orientations when desirable (cf. Figure 1); when they consider that their implicit motivational dispositions for behaviour are not fitting for the conditions of the present moment experience. Thus, mindfulness can result in (1) a reduction in avoidance behaviour, and (2) present moment behaviour that is based on an increased number and quality of options being considered.

Critical awareness and analysis of assumptions

In accordance with transformative learning theory, the process of perspective transformation concerns a process of an adult moving

toward a "more open, permeable, and better justified way of seeing themselves and the world around them" (Cranton & Wright, 2008, pp. 33-34). Mezirow (1991) proposed however that to achieve this deep and meaningful change involves an adult becoming critically aware of and analysing, *both*, "the conditions of their experiencing (how they are perceiving, thinking, judging, feeling, acting – a reflection on process) and… the reasons why they experience as they do" (Mezirow, 1991, p. 197). These are two key assumptions of the transformative learning process that underline transformative learning theory (Mezirow, 1978, 1991, 2012).

In this respect, the mindfulness mode may satisfy the former of these two assumptions, by affording the adult enhanced attention to and awareness of their thoughts, feelings, and sensations as they arise in the present moment experience – which is a reflection on the process and the conditions of their experiencing. Nonetheless, in accordance with transformative learning theory, in order to enable transformations in the adults underlying frames of reference, the adult learner would also have to satisfy the latter of these two assumptions. That is, the adult must become critically aware of and analyse the reasons why they experience as they do. This is depicted as a necessary stage of the transformation process in Figure 1.

Furthermore, empirical studies are required to test the theoretical model presented in Figure 1. An important direction for further studies on mindfulness and transformations, therefore, concerns testing this second assumption of transformative learning theory – that to convert behaviour change to change in meaning perspectives would necessitate the adult becoming critically aware of and analysing the assumptions that underlie the reasons why they experience as they do. In the studies examined in the present research, which provided accounts of transformations facilitated through mindfulness, it is possible that, for some adults, the enhanced attention to and awareness of their thoughts, feelings, and sensations as they arose in the present moment experience might have encouraged them to begin to examine the assumptions that underlie their frames of reference and where these assumptions came from (cf. Figure 1). Qualitative studies with semi-structured interviews could examine this possibility by analysing the process of perspective transformations facilitated through mindfulness. Moreover, it is also possible that some adults would benefit from support in this regard. For example, a therapist or educator could provide support by prompting

the adult to deeply and critically reflect on the assumptions that underlie their frames of reference, and where they came from. In this regard, for example, a randomised-controlled trial could employ a mindful intervention with or without a support treatment, to examine and test this model assumption (cf. Figure 1).

Conclusion

The present paper draws from empirical evidence from psychology and cognitive science to discuss the theoretical possibility that mindfulness may facilitate perspective transformations. Mindfulness denotes a skill that can be learned and practised, but genetic dispositional differences should also be considered. Empirical research shows that mindful individuals are more likely to modify their expression of their implicit motivational orientations when desirable. Mindfulness leads to the understanding that conditioned responses are what they are – conditioned responses – rather than an accurate reflection of truth or reality.

In the present paper, a theoretical model is presented that depicts a summary of an incremental transformative learning process that is facilitated through mindfulness (Figure 1). A key assumption of the model is that it does not intend to represent all forms of transformative learning, but rather that mindfulness is one potential facilitator of perspective transformations in certain situations. Specifically, mindfulness affords the adult an enhanced attention to their own thoughts, feelings, and sensations as they arise in the present moment experience. This metacognitive awareness may moderate the expression of motivational disposition for the present moment behaviour, termed desensitisation of conditioned responses: enabling a more objective assessment of the conditions of the present moment situation.

The key benefit for the adult in this regard is that mindful individuals increase the number and quality of options being considered and consequently adults are more likely to modify the expression of their implicit motivational orientations when desirable. This would seem especially important when an adult's implicit motivational disposition for behaviour is not fitting for the conditions of the present moment behaviour – especially relevant in modern day environmental conditions that are rather turbulent. For the adult, mindfulness can result in (1) a reduction in avoidance behaviour, and (2) present moment behaviour

that is based on an increased number and quality of options being considered. Nonetheless, in accordance with transformative learning theory, an adult would have to become critically aware of and analyse the assumptions that underlie the reasons why they experience as they do in order to convert behaviour change to perspective transformation – which represents a deep and meaningful shift in perspective toward a more open and justified way of meaning-making. Further empirical studies are therefore necessary to test the theoretical model presented in the present paper.

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Misconceptions in the knowledge of vocational fitness students and graduates

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The use of non-academic sources of health information is popular among both the public and exercise professionals. However, the quality of this information varies and without the application of critical thinking skills, may lead to misconceptions forming. This research aimed to compare the knowledge, presence of misconceptions, and critical thinking ability of vocational education and training (VET) fitness students at the beginning and end of their training, and qualified personal trainers (PTs). It also examines differences in the sources of information used by students and professionals. An Exercise Science Knowledge Survey was developed to assess knowledge and misconceptions about ten areas of exercise and nutrition. VET students were assessed at the beginning and end of a personal training qualification and PTs were surveyed once. Though VET students' knowledge improved and misconceptions decreased from pre- to post training, PTs did not differ from post-VET students in knowledge,

misconceptions, or critical thinking ability. PTs reported using more varied sources of information and were more likely to trust reliable sources. Critical thinking ability correlated with higher knowledge scores and lower misconception scores. Instruction in critical thinking should be embedded at lower levels of VET, and exercise professionals should be encouraged to undertake higher levels of study.

Keywords: *critical thinking, personal trainers, sources, professional development*

Introduction

The benefits of physical activity and healthy eating are well established and widely promoted to the public. However, patterns of eating and exercise can vary greatly, so it is not unusual for the public to search for information to inform their decisions. While searching for health information online is popular among the public, (Fox & Duggan, 2013; Hall, Bernhardt, Dodd & Vollrath, 2015), and those accessing websites for health information have a sense of competence and control in making health decisions (Lemire, Sicotte & Paré, 2008), there is a risk of receiving poor quality information. A range of informal sources such as forums and social media may be used (Lederman, Fan, Smith & Chang, 2014), and readers may not investigate the quality of the information presented in detail, instead relying on heuristics to judge the information (Metzger, Flanagin & Medders, 2010). A heuristic approach is a cognitive shortcut, used to reduce complex mental tasks into simple judgements, and speed up processing (Stanovich, Toplak & West, 2008). While often helpful, heuristics can negatively impact learning, as they may affect how new information is interpreted. This information may be judged based on its agreement with existing opinions (Koriat, Lichtenstein & Fischhoff, 1980), known as confirmation bias (Nickerson, 1998). Later evidence inconsistent with this opinion is diminished in importance (Sherman, Zehner, Johnson & Hirt, 1983), and over time the existing opinion can become stronger. If this opinion is incorrect, a misconception can form. This is a persistent belief contradicting current scientific opinion (Badenhorst, Mamede, Hartman & Schmidt, 2015).

Correcting a misconception requires the learner to undergo a process of conceptual change (Posner, Strike, Hewson & Gertzog, 1982). But

this process is more difficult, and the misconception more resistant to change, if the misconception is fundamentally different from the correct understanding. Chi (2005) used two physiological processes to illustrate this point. While circulation is a direct process, with clearly identifiable actions and effects, the process of diffusion is emergent, with a number of actions occurring concurrently, and independently of each other, and as a result, is harder to understand. Chi (2005) proposed that misconceptions can be durable if concepts are interpreted in a different ontological category, such as emergent process misunderstood as a direct process.

Misconceptions related to exercise and nutrition topics may originate from exposure to incorrect information and be strengthened over time as confirmation bias influences the perception of new information. Popular misconceptions in exercise and nutrition include concepts around obesity (Casazza, et al., 2013), protein supplements (Duellman, Lukaszuk, Prawitz & Brandenburg, 2008), vitamins (O'Dea, 2003) and resistance training (Manini, Druger & Ploutz-Snyder, 2005). To correct these misconceptions, Posner et al. (1982) proposed that the learner must become dissatisfied with their current knowledge (otherwise new information is rejected), and a new, convincing, intelligible conception must be available.

Misconceptions in personal trainers

There are over 27 000 exercise professionals registered with the peak body (Fitness Australia, 2016), the majority qualified as personal trainers. While Barnes, Desbrow, and Ball (2016) identified that PTs in Australia report high levels of confidence in their knowledge, they did not assess the actual knowledge of participants. Given that other research has identified significant errors in the knowledge of PTs (Kruseman, Miserez & Kayser, 2008; Malek, Nalbone, Berger & Coburn, 2002; Zenko & Ekkekakis, 2015), that confidence may be misplaced. PTs have also been found to place importance on experience and on-the-job training, over formal qualifications (De Lyon & Cushion, 2013), but research has found that the quality of sources of information PTs use to inform their practice are unrelated to their experience, or level of qualifications (Bennie, Wiesner, van Uffelen, Harvey & Biddle, 2017). A more experienced PT is not necessarily making better choices about sources of information.

Misconceptions have more potential to survive in the face of less reliable information. A meta-analysis by Stacey, Hopkins, Adamo, Shorr, and Prud'homme (2010) examined the sources of information used by PTs, and the barriers to using evidence-based information. Although only two studies met the criteria for inclusion in the meta-analysis, results showed that PTs reported difficulty assessing the quality of information they were presented with. Subsequent research is consistent with this, identifying a large proportion of Australian PTs rely on unreliable sources of information (Bennie et al., 2017; McKean et al., 2015). McKean et al. (2015) identified that the majority of trainers used online sources and magazines as sources of information, in addition to more reliable sources. Systematic reviews have consistently identified that online sources are mixed in quality (Eysenbach, Powell, Kuss & Sa, 2002; Zhang, Sun & Xie, 2015), with many not disclosing information like author details, sponsorships, or source material. Therefore, misconceptions could avoid correction, and even be reinforced. Bennie et al. (2017) attempted to identify factors that predicted the regular use of high-quality information in PTs, assessing age, time as an industry professional, employment status, qualification, the timeframe and mode of learning of their qualification, and industry setting. Of these factors, only age (those over 40 years old) and industry setting (outdoor personal trainers, and those in medium-sized facilities) predicted participants' use of high-quality sources of information.

While PTs in Australia are required to undertake professional development to maintain registration with the peak body, this registration is voluntary, and PTs have a broad scope to select the professional development they participate in. Given the sources of information identified above and the difficulties reported by trainers in identifying the quality of information, PTs could be exposed to very little evidence-based information. Errors in knowledge could, therefore, persist to become enduring misconceptions that are not corrected.

Misconceptions in students

Alternative concepts leading to exercise and nutrition misconceptions can arise, not only from misinterpreting information in instructional contexts (Morton, Doran & MacLaren, 2008) but also due to personal experience. Those without relevant expertise may arrive at a fast, intuitive explanation (Baylor, 2001), leading to a naïve concept that may interfere with further learning. University students have demonstrated misconceptions in

cardiac (Ahopelto, Mikkilä-Erdmann, Olkinuora, & Kääpä, 2011), exercise (Morton, Doran & Maclaren, 2008), and respiratory (Michael et al., 1999) physiology, however, the presence of physiological misconceptions have not been assessed in VET fitness students.

It has been proposed that an appreciation of the level of complexity of physiological systems, and the interaction between these systems, will reduce the presence of misconceptions (Badenhorst, Mamede, Hartman & Schmidt, 2015; Michael, 2007). However, this depth of knowledge is not typically a feature of VET, which assesses students' competence in completing job tasks, rather than the knowledge underpinning these tasks (Gonczi & Hager, 2010). Although it is a requirement of VET to prepare students for higher levels of study, research has shown that students transitioning to university struggle with understanding complex theoretical concepts, academic literacy, and the more independent, less scaffolded learning (Ambrose, Bonne, Chanock, Cunnington, Jardine & Muller, 2013).

Posner et al. (1982) recommended that for a conceptual change to be rational, instructors should develop in students an awareness of their assumptions, the assumptions implicit in scientific theory, and of the epistemological foundations of modern science. A key component of this type of thought is critical thinking ability (CTA), which is defined as reasoned, reflective thinking (Pithers & Soden, 2000). This also encompasses an awareness of the limitations of one's knowledge, and the skills to find, and assess the quality of, new information. Therefore, CTA may be a factor not only in the presence of misconceptions but also the sources of information chosen by students and PTs.

Critical thinking skills have been repeatedly identified as highly desirable by employers (Jackson & Chapman, 2012; Sheldon & Thornthwaite, 2005) but are not a major component of VET. CTA has, however, been found to be strongly associated with student success in United States community colleges (Fong, Kim, Davis, Hoang & Kim, 2017), suggesting it may also play a role in VET. The CTA of VET students before commencing a course, or the change in CTA during a course, has not yet been empirically investigated. There is also no known research on the CTA of PTs.

So, while it is known that the knowledge of PTs is often formed from poor quality sources (Bennie et al., 2017), misconceptions in the understanding of fundamental exercise and nutrition topics (that could

be passed on to their clients) have not been assessed, either in PT or VET students. Whether the CTA of PT and VET students is related to these misconceptions is also unknown. While recent research has examined the sources of knowledge of PTs (Bennie et al., 2017), it is not known if the use of more reliable sources, or trust in these sources, is related to better knowledge, or fewer misconceptions. The aims of this study therefore were, i) to assess the change in knowledge, misconceptions, and CTA during a VET fitness course, and compare these findings in students with VET qualified PTs; ii) to determine whether the presence of misconceptions was related to lower CTA, knowledge, or level of education; and iii) to identify the sources of information used by VET students and PTs, the amount of trust placed in these sources, and whether the use or trust of particular sources was associated with knowledge, CTA, or the presence of misconceptions.

Design

This was a prospective cohort study of students undertaking a vocational fitness course. Students were surveyed in the first weeks of their course, then again in the final week, during February and December 2017. This allowed the change in students during the course to be examined and is in contrast to previous research into the knowledge of students and professionals, which is largely cross-sectional. Practising PTs were also surveyed once within the same period.

Participants

Students completing the vocational qualifications Certificate III in Fitness (SIS30315) and Certificate IV in Fitness (SIS40215) were recruited from three Registered Training Organisations (RTOs) in Perth, Western Australia. SIS30315 contains prerequisite units for SIS40215, so these qualifications are often completed back-to-back to qualify as a PT. One hundred and eleven students enrolled full-time in on-campus (not online) courses were recruited. Sixty-six complete sets of pre- and post-course responses were obtained.

The PT group consisted of 70 Certificate IV qualified personal trainers, currently working in the delivery of exercise programs to adults and registered with Fitness Australia. The demographic characteristics of each group are shown in Table 1.

Table 1: Mean (±SD) group demographic characteristics, including highest educational attainment (AQF level), for VET fitness students and personal trainers

		VET fitness students	Personal trainers
Gender	Male	38 (58%)	39 (56%)
	Female	28 (42%)	31 (44%)
Age in years (SD)		24.15 (8.59)	33.17 (9.81) *
AQF level (SD)		3.42 (1.84)	5.49 (1.82)*
Industry experience (years)			6.10 (5.94)
Exercise AQF level			4.10 (0.30)

* significantly different to VET fitness students ($p < 0.05$)

A power analysis determined that a total sample size of 34 was required to yield an actual power of 0.8 for a paired samples *t*-test to assess differences in the student group pre and post course completion. One hundred and twenty-eight participants were required to yield an actual power of 0.8 for an independent samples *t*-test to assess differences between the student group and personal trainers. Eighty-nine participants were required for a multiple linear regression yielding a power of 0.8, based on six predictors of misconceptions (group, CTA, Australian Qualifications Framework [AQF] level, and trust ratings for three categories of sources of information).

Measures

The Exercise Science Knowledge Survey (ESKS) (Jolley 2019), which consists of a series of 10 misconceptions and 10 knowledge statements, was used to assess participants' endorsement of common misconceptions related to exercise and nutrition. The ESKS was designed following a series of interviews with experienced lecturers from university exercise science departments and vocational fitness courses. Lecturers were asked for their opinions regarding a range of misconceptions based on previous research (Ebben & Jensen, 1998; Kieffer, 2008; Morton, Doran & MacLaren, 2008), and their own professional experiences. Lecturers were also asked to identify how each misconception should be corrected, to inform the knowledge statements in the ESKS which assess the correct understanding of the topic. The items included in the ESKS are shown in Table 2.

Table 2: Misconceptions and knowledge statements included in the Exercise Science Knowledge Survey (ESKS)

Misconceptions	Knowledge statements
Protein is the most crucial nutrient for muscle growth. If you want to get bigger or stronger, the more you can eat, the better	Very large quantities of protein are not necessary to improve your response to training. Your body only uses as much as it needs, extra protein gets broken down and excreted in urine
Gentle, static stretching before exercise is a good way to reduce your risk of getting injured	A gradual, progressive increase in the intensity of exercise is a good way to warm up and prevent injury
An hour of low intensity cardio training will burn more fat than an hour at high intensity. Therefore, you will lose weight faster doing low intensity cardio training	Higher intensity exercise uses more energy than lower intensities. Increased energy expenditure is a key part of successful weight loss programs, so this should be encouraged when safe to do so
If a part of your body is exercised hard, you will lose body fat from that area. For example, stomach crunches will help to flatten your stomach	Fat metabolism is not a local process. You can't pick where you lose body fat from by exercising specific parts of the body
If you want to lose weight, then a short term fast or juice cleanse to flush toxins out of your system is a good way to get things started.	The weight loss result from a short term fast or juice cleanse is usually a result of reduced muscle glycogen storage, and less water retention. This weight will return once the fast finishes
When we exercise hard lactic acid builds up in our muscles. This is the cause of fatigue	You get tired when you exercise at high intensity for several reasons, including (but not limited to): depleted muscle glycogen, accumulated muscle damage, increased acidity in the muscle, and psychological fatigue
A vitamin supplement (like a multivitamin) can improve your well-being, energy levels, and exercise performance	A healthy, balanced diet provides most of the micronutrients you need. Vitamin supplements are unnecessary for most people
A diet high in protein and fats, with little or no dairy or grains, is healthier than what is recommended in the Australian Dietary Guidelines	A healthy diet should be generally consistent with the Australian Dietary Guidelines, contain food from all the major food groups (including grains & dairy), and contain moderate amounts of carbohydrate, fat, and protein
"No pain, no gain." To get stronger or fitter, you need to endure some pain. This is necessary to make your body adapt to exercise	It is possible for most people to get stronger without feeling significant pain. Muscle damage (and resulting pain) is largely caused by eccentric muscle contractions, and you can still get stronger while keeping soreness to a minimum
Women have a risk of getting too muscular if they lift heavy weights. To avoid this, use lighter weights, and perform more repetitions	Most people can lift heavy weights for improved strength and health, and not get too muscular. Women will generally find gaining muscle much harder than men, due to hormonal differences between genders

Participants rate whether they agree with each statement ("yes", "no", or "not sure"), and are instructed not to guess. For each item rated "yes" or "no", participants also rate their confidence in their answer on a three-point scale (1=slightly confident to 3=very confident). A "don't

know" answer to a statement resulted in a confidence score of zero for that item. The ESKS produces a Knowledge score and a Misconceptions score. Knowledge (KNOW) is computed from the number of knowledge statements rated as "yes" (maximum value 10). The Misconceptions (MISC) score is the number of misconception statements agreed with (maximum value 10). Cronbach's alpha for the Knowledge and Misconception scores were 0.64 and 0.77, respectively. Internal consistency coefficients of this magnitude have been considered adequate reliability for cognition and numeracy measures (Liberali, Reyna, Furlan, Stein & Pardo, 2012).

Critical thinking ability (CTA) was assessed using Frederick's (2005) three-item Cognitive Reflection Test (CRT), which requires participants to derive answers to mental arithmetic questions that have deliberative, accurate answers that are usually obtained after considering an incorrect, intuitive answer. The Cronbach's alpha coefficient in the present sample (a = 0.59) was below commonly accepted levels of internal consistency. However, given the CRT only contains three items, and has been shown to predict performance in tests of bias and heuristics (Toplak, West & Stanovich, 2011), and a range of other cognitive skills (Oechssler, Roider & Schmitz, 2009; Pennycook, Cheyne, Seli, Koehler & Fugelsang, 2012), which make up CTA, this was considered acceptable.

Demographic information and highest prior educational attainment (AQF level) were collected, as well as the length of time PTs had worked in the fitness industry, and their highest exercise qualification (Exercise AQF level).

Participants also identified what sources of exercise or nutrition information they had accessed in the previous 12 months from a list of 21 options of varying quality, including professionals, online sources, academic sources, and informal sources (such as friends). Participants also rated the trustworthiness of each source (regardless of whether or not they accessed this source) on a five-point Likert-type scale (1=not at all trustworthy, 5=very trustworthy).

Procedure

Ethics approval was granted by the Curtin University Human Research Ethics Committee (HRE2016-0292). All participants were volunteers,

and informed consent was gained prior to completing the survey. All responses were anonymous, with each participant generating a unique code that allowed matching of pre- and post-course survey data. The pre-course survey (pre-VET) was completed in the first week of the Certificate III, and the post-course survey (post-VET) was completed in the final week of the Certificate IV course. Students were recruited via the RTO delivering their course and surveyed during class time.

Personal trainers (PT) were recruited via convenience snowball sampling using the first author's fitness industry contacts, emails to Australian gyms, and postings on relevant private social media groups.

The survey was completed in person on a provided tablet device, without using reference material, and took approximately 15 minutes.

Data analysis

Data were analysed using SPSS Version 25 (IBM Corporation). Differences between pre-VET and post-VET were assessed using paired samples *t*-tests. Differences between pre-VET and PT, and post-VET and PT groups in Knowledge, Misconceptions, and Critical thinking ability were examined using independent samples *t*-tests. Cohen's *d* effect sizes were calculated to assess the practical significance of the differences between groups.

Pearson's bivariate correlations were used to examine the association between trust scores and Knowledge, Misconceptions, Critical thinking ability, age, and AQF level.

A hierarchical multiple linear regression analysis was used to examine the relationship between prior education, critical thinking ability, knowledge, and sources, and the presence of misconceptions.

Sources of information were combined into broad categories for analysis. Reliable sources (e.g., textbooks, public health promotion campaigns), and sources of mixed or unknown reliability (e.g. friends, social media, alternative health practitioners), were classified according to the categories identified by Bennie et al. (2017). Additional categories for exercise and nutrition professionals (degree qualified professionals, personal trainers, and physiotherapists), and other health professionals (general practitioners and pharmacists) were also established. The trust score for each category was the mean score for items in the category. Use of each source was coded

as either zero (did not access this source in the previous 12 months) or one (did access this source). The mode of each category was used to identify whether a participant was a user of these sources.

A chi-square test for independence was used to examine differences between PT, and VET groups in the sources of information used. Cramér's V was used to measure the strength of the association between participants' group, and the use of sources. McNemar's test was used to assess changes in the use of sources within the VET group. Differences between those using/not using sources were examined using an independent samples t-test. Differences between groups in trust ratings were examined using paired samples t-test (pre-VET & post-VET), and independent samples t-test (PT and both VET groups).

Significance for all tests was accepted at $p < 0.05$.

Results

Dropouts

Forty-five participants surveyed in the pre-VET group did not complete the post-VET survey. Pre-VET results were examined to explore differences between those who repeated the study, and those who did not. Dropouts scored higher in Misconceptions (4.96 ± 1.79 compared to 4.08 ± 1.65) than those who repeated the survey ($t(110) = -2.69$, $p = 0.01$), but there were no significant differences in Knowledge. Dropouts also scored lower in critical thinking ability (0.13 ± 0.40, compared to 0.38 ± 0.74; $t(110) = 2.07$, $p = 0.04$), had achieved a lower AQF level (2.36 ± 1.84, compared to 3.42 ± 1.76; $t(109) = 3.06$, $p = 0.003$) prior to beginning their course, and reported using fewer sources (4.20 ± 3.35, compared to 6.06 ± 4.20; $t(110) = 2.84$, $p = 0.01$), than those who completed the repeated the survey.

Knowledge and Misconceptions

ESKS and critical thinking ability results for the student group are shown in Table 3. Knowledge increased significantly from pre-VET to post-VET, while Misconceptions decreased significantly. Moderate effect sizes were observed in both Knowledge and Misconceptions. Critical thinking ability did not change.

Table 3: Mean (±SD) Critical thinking ability, Knowledge, and Misconception scores for pre-course (pre-VET) and post-course (post-VET) fitness students.

	Pre-VET	Post-VET	*t*	*df*	Effect size (*d*)
Critical thinking ability	0.38 (0.74)	0.42 (0.79)	-0.91	65	0.05
Knowledge	7.05 (2.12)	8.09 (1.50)	-3.86*	65	0.57
Misconceptions	4.08 (1.69)	3.00 (1.57)	5.43*	65	0.66

Results for the PT group compared to the student group are shown in Table 4. Independent samples *t*-tests showed that PT differed to pre-VET in all measures, with effect sizes being large for Knowledge, moderate for Misconceptions, and small for critical thinking ability. No statistically significant differences were seen between PT and post-VET on any measure.

Table 4: Mean (±SD) Critical thinking ability, Knowledge, and Misconception scores for personal trainers (PT), and comparison to pre-VET and post-VET students.

		pre-VET			post-VET		
	PT	*t*	*df*	Effect size (*d*)	*t*	*df*	Effect size (*d*)
Critical thinking ability	0.69 (0.92)	-2.13*	134	0.37	-1.77	134	0.31
Knowledge	8.56 (1.44)	-4.88*	134	0.82	-1.85	134	0.32
Misconceptions	2.94 (1.63)	4.03*	134	0.69	0.21	134	0.04

In the PT group, the exercise AQF of personal trainers did not correlate with Knowledge (r = 0.10 p = 0.42), or Misconceptions (r = -0.17, p = 0.17). Years of industry experience also showed no association with Knowledge (r = -0.10, p = 0.40), or Misconceptions (r = -0.02, p = 0.90).

Correlations between ESKS scores, critical thinking ability, AQF level, and age for the combined pre-VET and PT are shown in Table 5. Post-VET responses were excluded from this analysis, as these are repeated measures. Age, AQF level, and Critical thinking ability each correlated with Knowledge, and Misconceptions.

Table 5: Correlation between study variables in pre-VET students and PTs.

					Sources				
	AQF	CTA	KNOW	MISC	DQP	OTH	REL	MIX	N
AQF		0.26**	0.21*	-0.26**	-0.16	-0.20*	0.20*	-0.27**	0.16
CTA	0.26**		0.21*	-0.18*	-0.20*	-0.19*	0.10	-0.26**	0.19*
KNOW	0.21*	0.21*		-0.08	-0.04	0.01	0.30**	-0.23**	0.25**
MISC	-0.26*	-0.18*	-0.09		0.23**	0.15	-0.19*	0.29**	-0.08
DQP	-0.16	-0.20*	-0.04	0.23**		0.48**	0.30**	0.39**	-0.08
OTH	-0.20*	-0.19*	0.01	0.15	0.48**		0.28**	0.43**	-0.07
REL	0.20*	0.10	0.30**	-0.19*	0.30**	0.28**		0.13	0.16
MIX	-0.27**	-0.26**	-0.23**	0.29**	0.39**	0.43**	0.13		-0.10
NO.	0.16	0.19*	0.25**	-0.08	-0.08	-0.07	0.16	-0.10	

Critical thinking ability (CTA), Knowledge (KNOW), and Misconceptions (MISC), trust in categories of sources (degree qualified professionals [DQP], other professionals [OTH], reliable [REL], mixed/unknown reliability [MIX], and number of sources [NO])
* $p < 0.05$. ** $p < 0.01$.

A hierarchical multiple regression was conducted to predict Misconceptions scores based on participants' group (pre-VET or PT), AQF level, critical thinking ability, and trust in three of the four categories of sources of information (DQP, REL, and MIX) (see Table 6). Together the set of variables accounted for 20% of total variance in Misconceptions scores ($F(6, 135) = 5.25$, $p = 0.00$), with an R^2 of .20. Significant independent predictors were participants' group (p = 0.00), trust in reliable sources ($p = 0.01$), and trust in sources of mixed or unknown reliability ($p = .04$). AQF level and critical thinking ability did not significantly predict Misconceptions.

Table 6: Hierarchical multiple linear regression analysis predicting Misconception scores

Predictor	*B* [95% CI]	*β*	ΔR^2
Block 1			0.108**
Group	-0.57 (-0.84 - -0.29)**	-0.33	
Block 2			0.013
Group	-0.46 (-0.78 - -0.14)*	-0.26	
AQF level	-0.11 (-0.26 - 0.04)	-0.13	
Block 3			0.011
Group	-0.44 (-0.76 - -0.12)*	-0.26	
AQF level	-0.09 (-0.24 - 0.07)	-0.11	
Critical thinking ability	-0.22 (-0.56 - 0.12)	-0.11	
Block 4			0.065*
Group	-0.13 (-0.50 - 0.25)	-0.07	
AQF level	-0.07 (-0.22 - 0.08)	-0.09	
Critical thinking ability	-0.08 (-0.42 - 0.26)	-0.04	
Trust in degree qualified professionals	0.46 (-0.06 - 0.98)	0.18	
Trust in reliable sources	-0.64 (-1.14 - -0.15)*	-0.24	
Trust in sources of mixed/unknown reliability	0.55 (0.15 - 1.08)*	0.19	

* $p < 0.05$. ** $p < 0.001$

Sources of Information

Almost all participants reported having searched for exercise or nutrition information in the last 12 months (pre-VET 95%, post-VET, 97%, PT 96%). However, independent samples *t*-tests determined that the number of sources (pre-VET 6.06 ± 3.35 sources, post-VET 6.32 ± 3.54, PT 8.69 ± 3.98) used by PTs differed significantly to both pre-VET ($t(134) = 4.156$, $p = 0.00$) and post-VET ($t(134) = 3.662$, $p = 0.00$) groups, with moderate effect sizes for both ($d = 0.71$, and $d = 0.63$, respectively). A paired samples *t*-test showed no significant differences between pre- and post-VET groups ($t(65) = 0.66$, $p = 0.51$, $d = 0.08$). The total number of sources used did not correlate with any other variables.

The use, and trust, of sources in each group, are described in Table 7. McNemar's test revealed no significant differences from expected values in the use of any source from pre-VET and post-VET. Trust in other health professionals increased from pre-VET to post-VET ($t(65) = -2.45$, $p = .02$, $d = 0.32$), and trust in sources of mixed and unknown reliability decreased ($t(65) = 3.37$, $p = .001$, $d = 0.44$).

Comparison of PTs to pre-VET students showed observed counts significantly higher than expected for the use of exercise and nutrition professionals (χ^2 (1) = 10.55, $p = .001$, $V = 0.28$), and reliable sources (χ^2 (1) = 30.49, $p = .00$, $V = 0.47$). Personal trainers also had significantly more trust in reliable sources ($t(134) = -2.23$, $p = .03$, $d = 0.38$), and less trust in all other sources (PRO: $t(134) = 5.80$, $p = .00$, $d = 1.00$, OTH: $t(134) = 4.01$, $p = .00$, $d = 0.69$, MIX: $t(134) = 5.56$, $p = .00$, $d = 0.95$), with moderate or large effect sizes. Comparison to post-VET students similarly showed personal trainers had higher than expected counts for the use of exercise and nutrition professionals (χ^2 (1) = 10.55, $p = .001$, $V = 0.28$), and reliable sources (χ^2 (1) = 21.14, $p = .00$, $V = 0.39$). Trust was in reliable sources was not significantly different ($t(134) = -1.55$, p = .12), and less in all other sources (PRO: $t(134) = 5.24$, $p = .00$, $d = 0.90$, OTH: $t(134) = 5.54$, $p = .00$, $d = 0.95$, MIX: $t(134) = 3.59$, $p = .00$, $d = 0.61$), again with moderate or large effect sizes.

Table 7: Percentage of participants pre-course (pre-VET) and post-course (post-VET) vocational students, and personal trainers (PT) accessing each source, and mean (±SD) trust in each source.

	Pre-VET		Post-VET		PT	
	Use (%)	Trust	Use (%)	Trust	Use (%)	Trust
Exercise & nutrition professionals	37.87	4.18 (0.56)	37.87	4.11 (0.53)	65.71*	3.59* (0.62)
Other health professionals	0	3.78* (0.85)	1.75	4.06* (0.92)	5.56	3.13* (1.03)
Reliable sources	6.06	3.49 (0.66)	12.12	3.55 (0.77)	48.57*	3.73** (0.59)
Mixed/unknown reliability	15.15	2.94* (0.47)	16.67	2.74* (0.43)	28.57	2.42* (0.61)

* significantly different to all other groups ($p < .05$). ** significantly different to pre-VET only ($p < 0.05$)

Discussion

This study examined the knowledge, misconceptions and CTA in VET students and PTs, whether misconceptions were associated with critical thinking ability, education or knowledge, and identified predictors of misconceptions. It also investigated the sources of information used by students and personal trainers, the trust placed in these sources, and whether they were associated with knowledge or the presence of misconceptions. Students were demonstrated to possess misconceptions before entering a VET fitness course. These were partially corrected during the course, as Knowledge improved, and Misconceptions declined. However, there was no difference observed between PTs and students who completed the course, regardless of the experience of the trainer.

The increase in Knowledge during the course was expected. While previous research has identified that PTs performed poorly in assessments of required knowledge (Malek et al., 2002; Zenko & Ekkekakis, 2015), more difficult survey questions could account for this. The statements in the ESKS were largely simple enough for the public to answer correctly, and some misconception statements contained obvious flaws in reasoning. However, the lack of differences in between post-VET and PT groups provides some support for the findings of previous research (e.g., De Lyon & Cushion, 2013; Kruseman et al., 2008), suggesting that the professional development of personal trainers was largely informal and insufficient.

No relationship between Knowledge and Misconceptions was identified in the present study. Further, overall AQF level was associated with fewer misconceptions, while exercise AQF level was not. These findings suggest that misconceptions are not just the absence of knowledge and can co-exist with correct knowledge within the same domain. Furthermore, it appears that generic education and critical thinking ability are important factors in influencing misconceptions. This is consistent with Hughes et al.'s (2015) finding that misconceptions in psychology students were not related to the number of psychology units completed but did relate to time at university. Instruction in critical thinking skills may lead to greater success correcting exercise and nutrition misconceptions than merely providing specific information.

There was no significant change in CTA observed in VET students, although the previous education level of participants was correlated with CTA, also consistent with the findings of Hughes, et al. (2015). Additionally, the CRT scores observed were notably lower than previous research. The mean for PTs (the best performing group) in the present study was 0.69 ± 0.92, whereas other research using the CRT demonstrates a range of scores from 0.7 ± 0.93 (Toplak, West, & Stanovich, 2011) to 2.45 ± 0.64 (Alter, Oppenheimer, Epley & Eyre, 2007). These findings suggest that critical thinking skills are not well developed during a VET fitness course. There are some units in the Certificate IV training package (SIS40215) that require students to analyse health information, demonstrate evaluation skills, and maintain knowledge through independent study. But it has been proposed that teaching critical thinking is a complex, specialised skill, as it requires knowledge of not only critical thinking, but how to contextualise this within the course content, and the pedagogical skills to teach it effectively (Ab Kadir, 2017). Given the limitations of the teaching qualifications of VET lecturers (Guthrie & Jones, 2017), it is not clear they possess the skills to effectively deliver critical thinking instruction. While students are assessed as competent for these skills, the quality of the instruction, and assessment, of these skills is unknown.

From pre-VET to post-VET to PT an increase in the number of sources of information used was observed, with increased use of reliable sources, and exercise and nutrition professionals. Further, trust in all sources, except reliable sources, decreased. Fewer than half of PTs used reliable sources of information, consistent with Bennie et al. (2017), though

those that did scored higher in Knowledge. Since Stacey et al. (2010) highlighted the lack of research on the sources of information of PTs, this has been a growing area of interest. The variety of sources identified here supports earlier qualitative findings (De Lyon & Cushion, 2013) that informal and self-directed learning was an important source of knowledge for PTs. But while Stacey et al. (2010) identified that personal trainers were not confident in assessing the quality of information, those interviewed by De Lyon and Cushion (2013) did not express the same reservations. The differences in trust between VET students and PTs in the present study suggest that PTs can differentiate between reliable and unreliable sources, though the high number of different sources used by personal trainers suggests that this may not inform decisions about which sources to access.

The use of online sources has been a theme in recent research (Bennie et al., 2017, De Lyon and Cushion, 2013), and was a consistently popular source of information in the mixed and unknown reliability category of the present study. But the quality of health information from online sources is highly variable (Eysenbach et al., 2002; Miles, Petrie & Steel, 2000; Zhang, Sun & Xie, 2015), and users have been shown to rely on heuristics to assess the quality of the information they are presented with, using strategies such as endorsements from others, and the extent a site conforms to expectations, to make decisions about trustworthiness (Metzger et al., 2010). It is highly likely PTs will rely on similar strategies to inform their decisions, so it is plausible that misconceptions are reinforced by poor choices of online content.

Given the likely use of these heuristics, and given that Misconception scores did not relate to the exercise qualification achieved by the PT group, it is likely that generic critical thinking skills, such as research skills, the ability to interpret and evaluate claims, and introspection, are required to correct misconceptions. Furthermore, these skills have been repeatedly recognised as being highly desired by employers (Jackson & Chapman, 2012). Improving the depth of knowledge has also been identified as a way to prevent misconceptions (Badenhorst et al., 2015; Michael, 2007), but neither of these approaches to correcting misconceptions is characteristic of VET, which is largely competency-based.

Therefore, improved CTA may allow vocationally qualified PTs to improve their knowledge beyond what is developed during their VET

courses. Given the limitations of VET identified above, the lack of significant differences between post-VET and PT groups, and the lack of an effect from years of experience, it appears that there might be a need for explicit instruction in critical thinking, using domain specific content (Tiruneh, Veburgh & Elen, 2014), to allow PTs to choose appropriate sources of information. As the SIS40215 training package has simple critical thinking skills embedded in it already, attention should be paid to the pedagogical skills of VET lecturers to teach and assess these critical thinking skills. This could be achieved through modification of the Certificate IV in Workplace Training and Assessment or encouraging further study in education in VET lecturers. Further exposure to these skills for personal trainers should be obtained through specially designed professional development resources.

Limitations

There are some limitations to the present study which need to be considered when interpreting these results, and for informing future research. Assessing the impact of a vocational fitness course on professional practice is challenging due to frequent changes to the training package (major updates having occurred in 2000, 2004, 2011, and 2015). This means any sample of PTs is likely to include a variety of training packages, as well as different modes of delivery of training. Additionally, rapidly changing trends in fitness lead to popular misconceptions changing over time, so the misconceptions examined need to be regularly updated. This will make comparing research findings difficult, even when the same survey tool is used.

Although participants were instructed not to guess while completing the ESKS, Knowledge scores may over-estimate the knowledge of those surveyed, as participants may have decided to agree with statements that seemed plausible. For a more detailed assessment of knowledge, multiple choice or short answer questions may be required. Additionally, the reliability of the Knowledge subscale of the ESKS was not sufficient in the present sample. The Spearman-Brown formula indicated that expanding the Knowledge subscale to 15 items would result in a Cronbach's alpha of 0.72. This should be addressed for future use of this survey.

Conclusions

This study has shown that generic critical thinking skills are more important than industry experience or exercise qualifications as predictors of knowledge and misconceptions in practising trainers. PTs should be encouraged to pursue high level (diploma or degree) qualifications where possible to increase their exposure to these skills. There is also a need to further embed these skills into the current Certificate IV in Fitness course, as it appears that these skills are not being developed to a level that allows PTs to manage their professional development, or to accurately assess information on their own. But as VET trainers may lack the skills to teach these skills adequately, critical thinking and relevant pedagogical skills should also be developed further in VET trainers.

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Opportunities for change: What factors influence non-traditional students to enrol in higher education?

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In recent years, the Australian federal government has sought to increase the diversity of students attending higher education through supporting students that have traditionally been under represented. This is due to a perception that the attainment of a higher education can enhance a graduate's life as they have greater access to professional positions, which may also lead to higher wages and better career stability. Most of the existing research is focussed on the student's process of deciding to enrol, and how to support students to succeed once they are enrolled, but fails to explore in-depth narratives of students' stated reasons of why they enrol, and if they consider these preconceptions to have been met or challenged.

The current research contributes knowledge by investigating factors that lead students to enrol in higher education. The study aimed to examine how the Australian federal government's 'Widening Participation' agenda has affected Australians' perception of higher

education. It is important to examine how enrolment of non-traditional students has changed throughout the last fifty years, whether and how the Widening Participation agenda influenced enrolment of students and students' perceptions of the factors that led to their enrolment post completion of an enabling program. The research argues that the concept of a 'traditional' student enrolled in higher education is outdated and that 'non-traditional' students are now the majority.

Keywords: *higher education, widening participation, educational equity, first-in-family, neo-liberalism, gender*

Introduction

In the Australian higher education sector, there has been an increase in the enrolment of students who have traditionally been under-represented, due to the Rudd and Gillard Governments' adoption of the Bradley Review's Widening Participation recommendations (Bradley, Noonan, Nugent, & Scales, 2008). Some of the main changes to the enrolment into higher education were the implementation of a demand-driven system; that institutional-specific targets be set and monitoring of low socio-economic students' participation and performance. These targets would then be further monitored through benchmarking them against other OECD countries (Bradley et al., 2008). This significantly impacted upon which students enrolled in higher education, as institutions targeted low socio-economic students. As the sector gained a more diverse student cohort, this led to an increase in knowledge through education across Australia. It is important to understand how this educational shift has impacted upon Australian society, and if it has led to broader social change.

Traditionally the majority of students who enrolled in higher education matriculated straight from high school into their degree of choice. However, over the last 50 years, this demographic has shifted to about 50%, interchangeable between different universities, of student enrolments being derived from alternative pathways programs, previous study (TAFE or workplace) or students who decided to take a career break before enrolling in higher education. This has led to a shift in the student demographic and the researchers are investigating why

these *'non-traditional students'* enrol in higher education. Also, in the research project we seek to explore if the students perceive that higher education has made an impact upon their lives and if so how. Has this increase in their education led to any significant changes in their perception of the benefit of education for future generations?

Under-represented students may be, or are, categorised as having one or more (descriptors) identifying elements, such as low socio-economic status (SES), culturally diverse backgrounds, indigeneity, disability, being the first member of the family to attend university or returning as a mature student. However, I do acknowledge that in recent years the higher education demographics have changed and that this student cohort is no longer a minority but is becoming the 'traditional student'.

Widening participation: The changing face of the 'traditional' university student

The Baik, Naylor and Arkoudis (2015) longitudinal study of First Year Experience (FYE) students provides insight into the changing face of the 'traditional' student. Their research informs how the non-traditional student enrolling in higher education increased from 159,000 in 1994 to over 405,000 students in 2014 (p. 91). Baik et al (2015) consider this increase to be closely linked to Rudd and Gillard Government policies focussed on increasing access to under-represented students, particularly low socio-economic students (p. 99). Some of the major trends identified in this research was an increase in societal expectations for students to attend university and how students' reasons for enrolment were characterised by their: interest in the field of study (96%); better job prospects (87%); and creative endeavours (77%) (Baik, Naylor, & Arkoudis, 2015, p. 23). The main findings were that within the last 10 years students have become more diverse and confident in their ability to study, and have developed a clearer sense of purpose than their predecessors.

As the face of the 'traditional student' in higher education has continued to change, there can also be some resistance about how this will impact on the academic rigour of universities. Before the widening of participation agenda, universities were focussed on students that gained a mark that provided them with the Australian Tertiary Admissions Rank (ATAR) grade that enabled them to enrol into their degree of choice. Palmer, Bexley and James (2011) aired concern that

as the demand-driven system led to an expansion of university places for students, this could impact on the selection of courses and who seeks enrollment as institutions aim to meet equity targets. Knipe (2013) considers that if universities adapt their enrolment process to suit student demand and equity priorities that this could lead to a dropping in minimum threshold standards, which have been established to support students' potential for success. Pitman (2014) was also concerned about the focus on broadening university enrolments and the 'deployment of fairness through equity' (Pitman, 2014 p. 290). He argued that the ability of universities to maintain their elite status was important and that recent policies need to acknowledge this and consider how they can support disadvantaged students without compromising the status of universities.

The use of a gendered lens to explore equity in participation in higher education provides additional insight into who constituted the 'traditional' student. Some of the concerns about maintaining universities status could be linked to how universities perceive themselves in a traditional sense, and how this is constructed through a traditional lens that focused on ATAR grades and was led by the high rate of male enrollments (80% enrolled compared to females (20%) (in 1949; source: Department of Education and Training). As the traditional students have evolved it is also important to understand what this means for equity students. As many equity students have complex issues that may impact on their ability to succeed or complete their university course, but they also have lived experience and strengths that they may have yet to identify. This does not impact the universities' elite status, but rather provides a chance for non-traditional students to enrol and be provided with an opportunity to attempt university study. This may have been seen as unattainable before the widening of participation. Universities are not eroding their status but rather challenging the perception of universities as being linked to 'high culture' and only suitable for a certain 'academically inclined student'. Instead, universities may be transforming into a place of opportunities for any Australian that seeks to enrol into higher education and will then lead to a more diverse student cohort, which can correlate more closely with the general Australian population and to enhance the broader Australian educational base.

Current literature on why students return to study

Current literature reconfirms the research from seminal texts that indicate an array of reasons why non-traditional students decide to enrol in higher education, such as to be a role model for their children (Passe, 1998); to improve their economic status (Kaziboni, 2000); to stand out in the competitive employment market (Wong, 2018); or to develop personal enrichment (Cantwell & Mulhearn, 1997; Debenham & May, 2005; Fulmer & Jenkins, 1992). However, most of the research has been focussed on how their decision influences their ability to be successful students (Beaty, Gibbs, & Morgan 2005). Benson, Heagney, Hewitt, Crosling, and Devos's (2014) recent research was undertaken from a narrative inquiry approach and concluded that students' decisions to enrol were strongly influenced by their family, life events, sense of self and external influences. Other recent research was undertaken by Bunn (2014) in the Open Foundation program indicates that the main response was not related to returning to work and/or career progression, but the students' narratives about self-identity. Bunn does consider the social structure and human agency and argues that educating these students can be difficult as they 'enrol for educative purposes, but are also seeking identity transformation (p. 1)'. Although there exists a large body of work on why non-traditional students return to study, this focusses on the decision-making process, rather than the perception of why they enrolled.

A theoretical and conceptual framework for this study

The study design utilises a systematic steps framework to address a problem area, create a study, analyse data and disseminate findings. As noted by Grinnell and Unrau (2011), there are eight steps to this framework:

Step 1: Problem identification
Step 2: Research questions and formulation
Step 3: Design the study
Step 4: Data collection
Step 5: Data analysis
Step 6: Interpretation of findings
Step 7: Presentations of findings
Step 8: Dissemination of findings.

All these steps stem from existing literature and to add current findings to existing literature.

The current study aimed to explore students' perception of what was happening in their lives before they enrolled and examines if this differs from their decision to enrol. It was undertaken to gain insight into the factors that enable students to enrol in higher education. The Enabling Program is a program that caters for students that have traditionally been under-represented or had a break in their education and are seeking re-entry into higher education. The current study aimed to explore the factors influencing the students' decisions to enrol in higher education and how these correlate with established literature. The objective was to improve the understanding of the factors influencing enabling students to enrol in tertiary education and how these might be related to broader societal, personal or political influences.

Study setting

The university in the current study has one of the largest and oldest enabling programs in Australia. It enrols some 2200 students per year at the study setting (Study University's Planning and Core Centre Reports, 2014). The university provides three enabling programs, which aim to support people who wish to enrol in higher education through an alternative pathway. About forty per cent of the enabling student population has been identified as low SES, through postcode (Study University's Statistics for Program reports, 2014). For this paper, the authors define these enabling students as non-traditional students, as this cohort did not directly transition from high school into higher education.

Aims

This study aimed to:

1. Investigate non-traditional students' reasons for enrolling in higher education.
2. Examine how the Australian federal government's Widening Participation agenda has affected Australians' perception of higher education.

3. Investigate if students' perceptions are linked to broader societal expectations of success.
4. Examine if students consider the attainment of a higher education award as improving their personal, economic and social status.

Methods

Recruitment

Students were recruited through a register known as the Potential Enabling Program Participant Research (PEPPR) register. The PEPPR register has a list of names of previous students that have completed an enabling program at the study university and indicated that they would be interested in participating in research.

An email was sent to students, who studied an enabling program between 2005–2015 and are on the PEPPR register, inviting them to participate in the study. Students were recruited through the PEPPRRegister, a record of almost 1,300 students who have completed an enabling program at the study university participated from as far back as 1974. PEPPR was set up over six years ago by Associate Professor Seamus Fagan and Professor Jim Albright to facilitate research in the area of enabling education. A large number of variables have been built into PEPPR to capture a broad range of data including gender, age, language background, area of study, completion, first in family and ethnicity. Researchers can apply to use PEPPR to design a targeted study.

Professor Albright has previously explained the use of the register to be a 'vehicle for facilitating research in an under-researched area' to help lead to high-quality research of scale that speaks to policy. The data records a participant's circumstances before commencing English, Language and Foundation Studies, their experience throughout the program and the outcomes after completion to capture how their life may have been transformed. When interviewed in June 2016, Associate Professor Fagan has stated 'limited research has been conducted into the outcomes of these ground-breaking programs. We hope that the PEPPR Register along with the Centre of Excellence for Equity in Higher Education will harness the already existing pockets of excellence in equity research in the University and create awareness of this work both nationally and internationally'.

Sampling

Purposive sampling was applied as the participants have been chosen for a particular purpose and the sample gives insights into particular study areas (Alston & Bowles 2012) and can provide rich information for studies that are seeking in-depth analysis (Liamputtong, 2013). The study was seeking to understand enabling students' perceptions of why they enrolled in tertiary education. Attaining a sample from the PEPPR register ensures access to the targeted sample group, however, there is a need to consider that data saturation, in that the study has targeted individuals with exposure to enabling programs and are knowledgeable about the area under investigation, which may lead to limitations of new insights (Grinnell & Unrau, 2006; Liamputtong, 2013). Demographical information was also collected to provide a baseline of participants.

Survey design

An online mixed method survey was used. The mixed method survey included basic demographic questions and a 5-point Likert scale with open-ended questions. Using a survey has some benefits such as access to a large number of participants in a short time frame but can have limitations too. Limitations include the lack of non-verbal communication such as facial expressions, equity of individuals without access to computers/internet or participants who are computer illiterate and have difficulties in sustaining online interaction over time as well as low response rate due to information overload (Liamputtong, 2013).

Table 1. Advantages and disadvantages of an online survey

Approach	Helps to gather	Advantages	Disadvantages
Online mixed methods survey	A timely generalisation Test hypotheses Subgroup differences	Generality Quantitative Qualitative Timely replicable	Superficial Obtrusive Structured Self-reporting

The Likert scale is a standardised approach and was used in the survey to measure the participants' perceptions of the factors that led to their enrolment into tertiary education. The benefit of the Likert Scale was that students are provided with a continuum scale between 1 and 5. This is a commonly used survey approach and has been used purposefully as it is easy for participants to understand, and it is hoped that this has minimised

any issue of response set/bias (Neuman, 2011). The benefit is that the Likert scale can be compiled into an index to support reliability and validity, but the limitation is that it 'can result in the same overall result, and the response rate is a potential danger' (Neuman, 2016 p. 2011).

There were six open-ended questions and a thematic analysis was undertaken to generate themes, as outlined in Braun and Clarke (2006). After undertaking a literature review of relevant research, survey questions were constructed to elucidate the factors that lead to students' enrolment in enabling programs. The questions in the survey align with findings in the literature about students' reasons for enrolling in tertiary education. Content and face validity of the survey was conducted with academic staff in the study University, as they are experts in the enabling education field of study.

Survey implementation

Students were emailed a Participation Information Statement (PIS) in July 2016 about the project and invited to participate in an online mixed methods survey, via a web link embedded in the email. Students were informed that their participation was voluntary, and they would not be disadvantaged if they chose not to participate. Completion of the survey was accepted as implied consent to participate.

Students who agreed to participate were asked to complete an anonymous online survey asking about the factors behind their decision to enrol in an enabling program. Participation in the research was entirely by choice. The project consisted of an anonymous online survey. Students were asked to tick the box indicating that they had read this Participation Information Statement (PIS) and submit the survey. This indicated that they had provided informed consent and were included in the project.

Whether or not they decided to participate, the decision did not disadvantage them. If they decided to participate, students could withdraw from the project at any time submitting the completed survey. Due to the anonymous nature of the online mixed method survey, they were not able to withdraw their response after submission.

The survey was released with a response required within two weeks to allow time for participants to respond without overly delaying analysis of

data. However, the survey was left open for four weeks. The information provided from the PEPRR Register indicates that approximately 700 students were accessed through the register. Eighty-two responses were received, which means that 11.7% of students participated.

Ethical considerations

Ethics approval for this project was attained from the University Human Research Ethics Officer and the second affiliated University for this study. Ethics applications were peer reviewed to ensure cultural competency needs were addressed in survey design and during the analysis of data and dissemination of findings. Recruitment bias was minimal, as only enabling students who registered with the PEPPR register were contacted. This project utilised an online survey. All participants were anonymous, and all Survey Monkey data was downloaded and stored confidentially and securely on a password-protected computer, accessible only to the researchers. Data was deleted from the online service as soon as possible after the data has been collected.

Data analysis: Interpretive Social Science approach

This study uses an Interpretive Social Science (ISS) approach, a methodology designed specifically to study social science with an action of purpose. This approach seeks to understand what motivates or shapes a person's internal feelings and guides decisions to act in particular ways. It considers how meaning is socially constructed within the context of the social world (Neuman, 2011, p. 87). Neuman (2011, p. 88) describes the approach as 'The systemic analysis of socially meaningful action through the direct detailed observation of people in natural settings to arrive at understanding and interpretations of how people create and maintain their social world'. This approach was based on Neuman's (2012) outline of 10 elements that need to be considered in Interpretive Social Science (ISS) approaches to research:

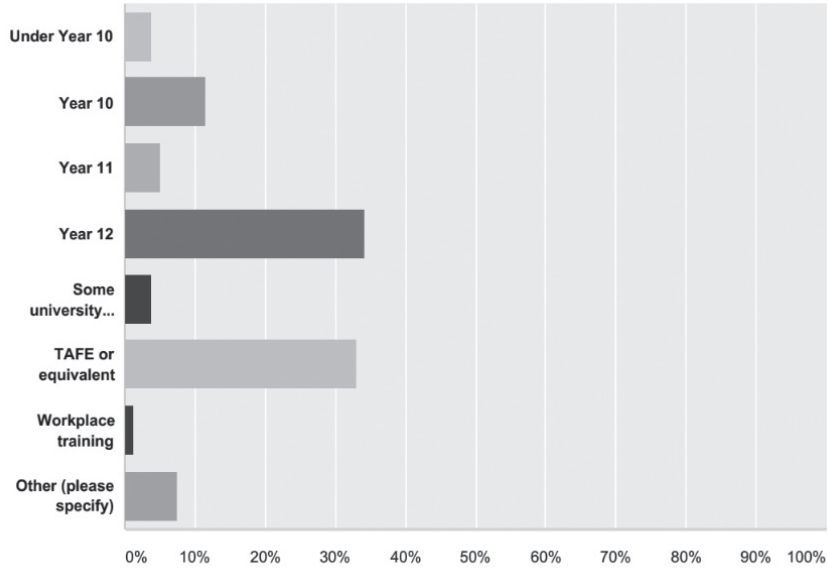
1. Rationale for conducting the research
2. What is the fundamental nature of social reality?
3. Basic nature of human beings
4. Human agency
5. Relationship between science and common sense
6. Theory of social relationships

7. Making of meaning. What is 'true or false'?
8. Evidence
9. Relevance
10. Social political

Results

Out of the 82 respondents, 69 identified as female and 13 male. When asked about completion of Open Foundation: 95.12% (78) had completed, 3.66% (3) did not complete and 1.22% (1) indicated it was not applicable. When asked if they continued onto undergraduate study: 88.49% (66) indicated yes and 15.85% (13) indicated no, with 3.66% (3) indicating that it was not applicable. There was a high rate of students that self-identified as being the first member of the family to attend university 41.98% (34), and 58.02% (47) indicated that they were not the first member of the family to attend university; one person skipped the question. When asked: Have any of your siblings, extended family or friends graduated since you have? 42.50% (34) indicated Yes and 53.75% (43) indicated No and 3.75% (3) did not know.

Figure 1: Highest level of educational attainment prior to enrolment in the Enabling Program.



This data indicates that many students had not completed their higher school certificate prior to enrolling in an enabling program (20.99%) with many having either TAFE, workplace or other training (41.97%) with 37.03% of respondents having attained the HSC or had some exposure to university. Many of the students with TAFE, workplace, or HSC would most likely have been granted access without completion of an enabling program, which seeks to question why they enrolled into an enabling program instead and if this was linked to broader needs than access into university. This was an unexpected finding and further research into why students choose to undertake an enabling program rather than direct entry into higher education would add another rich layer to the current knowledge base.

Table 2: Factors that influenced students' decision to enrol in enabling programs

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree	Total	Weighted Average
Career progression	3.90% 3	10.39% 8	19.48% 15	38.96% 30	27.27% 21	77	3.75
Influential mentor	16.88% 13	22.08% 17	31.17% 24	24.68% 19	5.19% 4	77	2.79
Right time in life	1.28% 1	5.13% 4	3.85% 3	62.82% 49	26.92% 21	78	4.09
Attain or develop knowledge	0.00% 0	2.56% 2	2.56% 2	52.56% 41	42.31% 33	78	4.35
New learning experiences	1.30% 1	2.60% 2	6.49% 5	48.05% 37	41.56% 32	77	4.26
Help to gain employment	5.13% 4	8.97% 7	15.38% 12	35.90% 28	34.62% 27	78	3.86
Entry into University	5.13% 4	3.85% 3	8.97% 7	29.49% 23	52.56% 41	78	4.21
Self-esteem	5.19% 4	12.99% 10	14.29% 11	42.86% 33	24.68% 19	77	3.69
Family	7.79% 6	23.38% 18	23.38% 18	35.06% 27	10.39% 8	77	3.17
Social status	19.48% 15	28.57% 22	25.97% 20	22.08% 17	3.90% 3	77	2.62
Long-term economic benefit	6.41% 5	14.10% 11	12.82% 10	35.90% 28	30.77% 24	78	3.71
Long held ambition to do so	11.54% 9	11.54% 9	8.97% 7	30.77% 24	37.18% 29	78	3.71

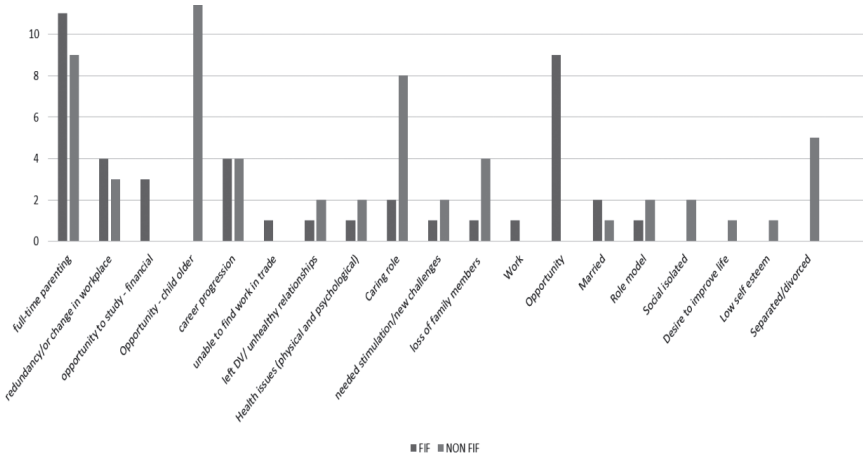
The data indicates that the respondents consider the main three factors that influenced their enrolment into an enabling program to be: to attain/develop knowledge (4.35); and new learning experiences (4.26); entry into university (4.21) followed closely by being the right time in life (4.09). While social status (2.26) and influential mentor were the least likely factors. Other factors, such as help to gain employment (3.86); career progression (3.75); long held ambition (3.71); economic benefit (3.71); self-esteem (3.69); and family (3.17), were also strong but ranked as less important. This indicates that students perceive that they enrolled into an enabling program to develop skills and entry into university rather than to identify transformations.

Life circumstances prior to university

The short answer data collection was thematically analysed to generate the main themes. The main themes are Question 1. What was happening in students' life before enrolling in higher education (personal, work or at home). The highest theme was opportunity due to full-time parenting (20), followed by children being older (14), caring role (10) opportunity (9), career progression (8), and separated/divorced (5). Other areas were changes in the workplace, health issues, and social isolation; desire to improve life and role model.

Comparison of students, who are the first member of the family (FIF) to enrol in higher education and students who are not the first member of the family (NON FIF) show differences. With FIF main reason full-time parenting (11) and opportunity (9), while NON FIF the main factor was full-time parenting (9) and opportunity due to children being older (14). Many of the NON FIF life circumstances can be linked to their roles as carers and internal issues such as social isolation, divorce, loss of a family member, low self-esteem, while the FIF was strongly linked to external factors such as opportunities (10) workplace issues (7) financial barriers (3) rather than internal considerations.

Table 2: Comparison of FIF and NON-FIF responses to What was happening in students' life prior to enrolling in higher education (personal, work or at home)



The strongest theme to emerge was the need to wait for the 'right time in life', which included caring roles and financial barriers. This may be due to the respondents to the survey being predominately female (Out of the 82 respondents, 69 identified as female and 13 male: review figure 3) or how women tend to delay their educational opportunities for an external reason such as caring for children and or family and needing to wait for financial security. Whilst men may consider enrolment into university as career development, women may see it as secondary to their caring role. This asks further questions about how gender plays a role in access to higher education.

Figure 3: What gender do you best identify with?

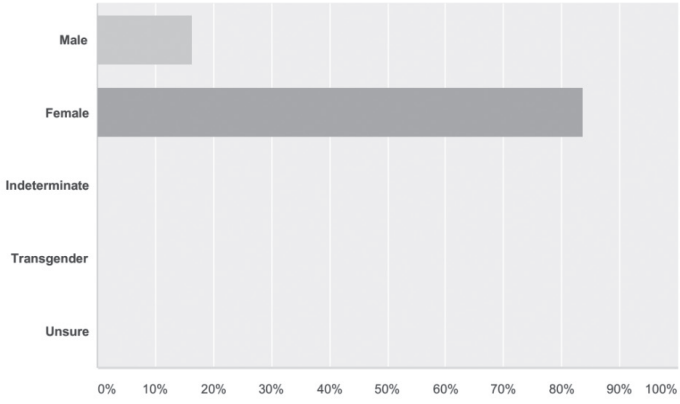
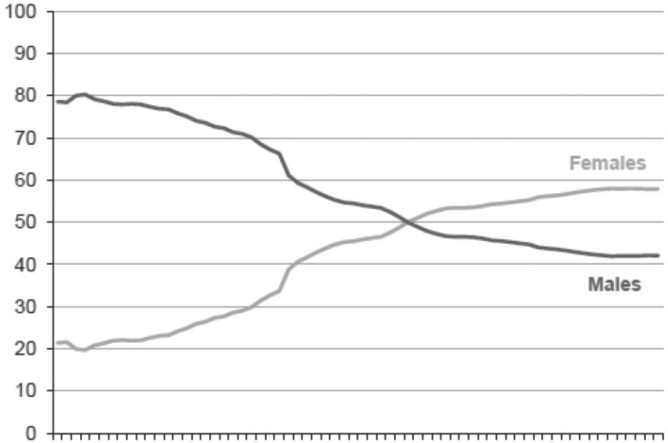


Table 3: Age of respondents

Please indicate your age range		
Answer options	**Response percentage**	**Response count**
20 years and under	1.3%	1
21–25	7.5%	6
26–30	20.0%	16
31–40	30.0%	24
41–50	26.3%	21
51–60	8.8%	7
61 or older	6.3%	5
	answered question	**80**
	skipped question	**0**

The responses might also be related to the age of the participants, as the main range was between 26–50. This may support how many women are the main carers or have parenting responsibilities that once fulfilled enable them to pursue personal goals, such as further education. The stage of life of students can affect the students' perception of why they enrolled in higher education. In addition, as the Enabling Program is free, and targets equity and mature aged students, there is little risk of students being pressured to have to commit to and pay for a minimum three year degree but rather gain a soft approach to access to higher education, as it enables them to 'dip their toes' into higher education and see if it is something they want to pursue.

Figure 4: Higher educational enrolment of all female and male students 1949–2014.



Source: Department of Education and Training (2015)

Interestingly, women have slowly overtaken men in enrolling in higher education since about 1985. When considering the courses studied, there are some gender differences. Male dominated areas of study are: information technology, engineering, architecture and building, whilst females dominated enrolment in education, health, society and culture and creative arts courses (Conversation, 2018). Although there has been a significant increase in women gaining access to higher education, in Australia and other developed countries, many women still consider there are barriers that have yet to be renegotiated (Wilkinson, 2014) and significant hurdles in developing countries were gender inequalities and class divisions (Khattak, 2018; Kilango, Qin, Nyoni, & Senguo, 2017; Mollaeva, 2018).

Discussion

Widening participation

There is a considerable body of research and literature on widening participation and the challenges and strengths that non-traditional students bring to their educational journey (Cuthill & Jansen 2012; Kift, 2009a; 2009b; Tedder, 2007). Devlin & McKay (2012) and the focus predominately is on how to support students (all students traditional and non-traditional) to not only gain access to higher education but also ensure that there are effective practices to enable students to succeed. This is where the widening participation agenda led to a focus on how to support students in the first year of study. The newly emerging field had undertaken significant research into how to support students to succeed during their first year of study (Warburton, Bugarin, & Nunez 2001; Kift 2009a 2009 b; Devlin & McKay, 2012; Engstrom & Tinto, 2008; Tinto, 2000; 2003; 2006; Scutter & Wood, 2009). Called First Year Experience (FYE) research, it seeks to develop a framework and strategies to support early student engagement, through orientation and engagement, to enhance student success and retention through developing learning communities and collaborative pedagogies. The research indicates that if students are effectively supported during their first year of study it significantly improves the likelihood of their ability to successfully complete their degree.

Widening participation: First Year Experience

Another essential part of the FYE literature is the holistic approach to all students' educational experience and the assertion that a student's academic journey is perceived through a personal, social and educational lens (Lizzio & Wilson 2004; 2008; 2013), which needs to be considered when seeking to support students during their enrolment. Lizzio's (2006) research revealed how students' motivation for academic achievement can be strongly linked to their perception of their skills and capabilities. He considers the students' identity and how the students are creating 'new professional and personal future identities' (2006, p. 110) and the students' position in self-evaluation and agency in constructed identities or self-markers. Lizzio's (2006) findings showed that there was a need to understand the personal and situational factors that influence students' perception of 'skills' and he uses a conceptual model framework based on five senses of success: Sense-making narratives; Relevance of the course of study; Accessible role models; Meaningful work and contribution; Lifecycle progressive and cumulative activities (Lizzio & Wilson 2013, p. 110). This research is indicative of how students' success and academic achievement is strongly linked to their perception of skills.

Widening participation: Neo-liberal perspective

Widening participation on face value can seem beneficial to the Australian people as they become more educated and better placed for new emerging workplaces that will be strongly influenced by information technology in a global workforce. Whilst it is essential to be ready for future workplaces, the widening participation agenda is also linked closely to a neo-liberalist focus. The Bradley review (2008) indicates this where he rationales that Australia needs to have a global focus and to seek to ensure that communities are educated and remain internationally competitive. The review reiterates this by highlighting how Australia's status on the Organisation for Economic Cooperation and Development, was in decline and would likely continue to decline unless we followed other countries and increased access to and the quality of our higher educational system (Bradley et al., 2008). This is supported in international studies (Griffin & Hu, 2015; Goastellec & Välimaa 2019; Kung, Turnbull, & Chur-Hanson, 2017; Mergner, Leisyte, & Bosse, 2019:) as they consider that the widening participation agenda has

enabled 'non-traditional' students to increase their social mobility, develop resilience whilst also allowing the general population to become more 'up-skilled' for future workplaces, however, also acknowledged that they have encountered many equitable barriers from an early age. Also, you need to ensure that social mobility and a skilled market are not conflated as they are very different perspectives and outcomes. If the higher education sector views enrolment through a neo-liberalist lens it will impact on university policies and the purpose of the higher education sector in Australia. Neo-liberalism is open to many different interpretations, but the main consensus is that it is an economic system in which a 'free' market is seen to as a way in which to create an open market dictated to by competition. This involves the state becoming less involved in public welfare or infrastructure, divestment and selling off of state-owned assets and championing policies that enable a 'free' market to prosper. It is also associated with free trade agreements. The idea is that the public will prosper from increased employment opportunities, cheaper goods and that the market will set the price dependent on needs (competition), however, there are many critiques of the 'free' market driven forces and concern about equity (Conversation, 2019). If the higher education sectors focus is to enable Australia to be prepared for future workplaces then how does that impact on broader Australia and the purpose of the higher education sector in Australia? Is it to educate or prepare for the changing workplace landscape? And are the two exclusive or interchangeable? Also, how do economic incentives impact on education outcomes? Does the focus shift from education to a focus on attrition and completion rates?

Bennett, Hodges, Kavanagh, Fagan, Hartley and Schofield (2012) have explored these concepts and questions whether a focus on attrition and completion rates might dismiss students' exposure to university. Bennett (2012) considers attrition rates in higher education through a neo-liberal lens and explores the concepts of higher education from a 'soft' (attrition based on positive withdrawal from study) and 'hard' (pure attrition rates) perspective. In her research, she argues that students who do not complete their program still benefit from 'a significant shift in aspiration, opportunities and education' (Bennett et al., 2012, p. 144) and also shows how fundamentally the enabling program provides 'the opportunity to 'test the waters' of university study while doing the courses that provide access to university' (Bennett et al., 2012, p. 153). This perspective considers how 'soft' attrition can be positive, even if students do withdraw from their study, as students they have gained exposure to new learning and educational opportunities.

This challenges traditional neo-liberal perspectives that link success solely to student completion rates and the ability for students to economically contribute to society. Further research into this area would enhance our knowledge of the impact of neo-liberalism on the higher education system.

Widening participation: Gender

The main theme to emerge from the data was how gendered access to higher education can be. Whilst women are enrolling more than ever, the courses that they are predominately enrolled in involve caring roles (nursing, teaching), whilst male enrolments are more aligned with STEM and built environment courses. Another strong theme was that women had to consider many obstacles to their enrolment, such as impact upon family children; what stage in their life that they could enrol in study (after children or when they get the opportunity), and it appeared as if their journey was secondary to many other factors. This indicates that there is still a clear power imbalance, as women have to negotiate many decisions before enrolling in higher education. Women appear to have to consider how their enrolment will impact on their or their family finances, or how they navigate their role as a carer for family and/or children. Whilst the study indicates that the men surveyed were more focussed on enrolling for career progression without as much concern for impact on the family and others, this may allude to the pressure that men have as the 'breadwinners' and therefore have to provide for the family.

Limitations

There is a plethora of research into the increase of enrolment of females into higher education, and the gender imbalances that still exist. These are important issues however they are outside the scope of this paper; rather we acknowledged that this is an important aspect to be considered and the impact upon access to higher education for women both locally and globally, and their possible future careers.

Conclusion

What do enabling programs offer in peoples' lives?

Enabling programs offer students an opportunity to attain a qualification to enrol in higher education, but it does much more than that, it also

provides an opportunity for social change. As more women attend university and diversity increases, it creates better equality across Australian society. As people attain an education, it can enrich a student's life by improving their self-esteem and career prospects; preparing them for new challenges in emerging industries and creating a more educated society. There are political considerations that need to be considered such as neo-liberal perspectives to prepare Australia for changes in the workforce, as technology challenges traditional roles and participation of women in the workplace continues to grow. It becomes important to this agenda to understand how to support programs that target equity groups. This study also paints a picture of the decisions that influence students to return to study and how subliminal gender themes are present and still impact predominately on female students' decisions to enrol. However, programs such as the enabling program ensure that all students are offered the opportunity to enhance their lives, knowledge and self-esteem regardless of their gender or social status.

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Making the intangible, tangible: Assessment design that fosters curiosity, confidence and collaboration during international short-term study tours for Australian students

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A distinctive characteristic of study tours is their immersive nature, and the type of learning developed in such circumstances often relies on instinctive skills related to confidence, flexibility, curiosity, resilience and risk taking. To discover more about these learning experiences for adult undergraduate students studying varying disciplines in the creative industries at an Australian University, the researchers employed educational action research and developed assessment modules to foster student awareness of intangible skills and personal characteristics during short-term international study tours. On the completion of the tours, participating staff and students provided feedback, via a questionnaire and focus group discussions, that assessed the value of these modules in promoting learning and their contribution to personal growth and cultural sensitivity. Findings show that these modules were highly effective at enabling adult

students to become aware of the skills they employed while being actively engaged in international study tours. This study highlights the potential significance of immersive assessment modules that provide specific ways for students to engage with their host country and the cultural differences to which they are exposed.

Keywords: *Study tours, international education, higher education, creative industries, assessment modules, work integrated learning*

Introduction

International short-term study tours can offer valuable learning experiences and enhance students' personal growth. A recent Australian review of learning abroad outcomes found that a well-designed short-term program could have a significant and lasting impact upon participants (Potts, 2016). In a tertiary academic context, adult students who travel to overseas destinations are generally required to complete conventional assessment tasks such as reflective essays, journals and group presentations that enable tour leaders to determine whether students have gained content knowledge (source anonymised for blind review). Yet, adult students also acquire other skills as they immerse themselves in new environments, often confronting personal challenges when adapting to new places and cultures. These intangible and transferable skills include 'intercultural competence' and 'global perspectives' that can improve their intellectual development (Potts & Berquist, 2014, pp. 1–4). Other intangible and transferable skills frequently associated with international study include 'curiosity, initiative, risk taking, suspension of judgment, cognitive flexibility, tolerance of ambiguity, cultural humility, and resourcefulness' (Bennet, 2008, p. 20), which can have beneficial lifelong impacts, including the enhancement of future employability (Foundation for Young Australians, 2015). For students within the creative industries disciplines, these skills are particularly important as they navigate the changing landscape of employment opportunities that are often non-traditional and require unique abilities.

These intangible and transferable skills may be fundamental to adult student experiences during short-term international study, or study tours, but discerning and assessing them can be a challenge. Research shows the opportunities for guided reflection and interaction with locals throughout

the time abroad can lead to the development of intercultural sensitivity (Campbell & Walta, 2015). These opportunities can also form part of the assessment tasks used within study tours. And similar to assessment practices in more traditional classroom-based contexts, improving assessment for learning is vital in a rapidly changing higher education environment and even the 'most well-designed and validated assessments are meaningless unless they are feasible to implement' (Coates (2016, pp. 663–664). This presents a challenge for those who wish to design assessment to support 'nebulous' intangible personal characteristics, and the lack of evidence about its benefit for students has thus far inhibited institutional recognition and support (Potts, 2015). As a consequence, there are currently no formal national assessment guidelines that address such outcomes in Australia (Tucker & Weaver, 2013). This, in turn, has limited the development of coherent administrative, logistical, pedagogical, and curricula frameworks that inform this learning for international study tours (Potts & Berquist, 2014).

To address this gap, the authors applied an action research methodology to design, implement, and evaluate assessment items aimed at helping adult students identify intangible personal learning during study tours. The focus was to encourage students to become more active in individual and group learning contexts within seven study tours offered at a large Australian university, located in a major city. All tours spanned two to four weeks and were offered across a range of disciplines, including architecture, fashion, industrial design, interactive and visual design, interior design, landscape architecture, creative writing and literary studies, dance, drama, entertainment and arts management, film, screen and animation, journalism, media and communications, music, and visual art. The tours were elective options in the students' undergraduate degree structure and were provisionally aligned with Work Integrated Learning objectives in the faculty. Although many of the specific study tours had been taught for numerous years, they are continuously evolving to respond to current trends and staff expertise and availability.

At the conclusion of the tours, the authors administered an online questionnaire with students and staff and held focus groups with students to better understand the impact of such assessment on students' awareness of the type of soft skills they were utilizing on study tours. This article presents the findings and suggests directions for future research in this critical area of higher education for art and design adult students.

Acquiring intangible skills as a process of 'being'

Universities face increasing demands to prepare adult students for success in a global workplace characterised by uncertainty and disruption, and where employers seek innovative people with intangible personal capacities such as initiative and resourcefulness (Andrews and Higson, 2008). In this regard, the visceral, immersive, and novel environments adult students face when on international study tours are ideal platforms to use skills that can enhance their employability while inspiring creativity. Barnett and Coate (2005) acknowledged the importance of using curricula to prepare students for a rapidly changing world through the development of flexibility, adaptability, self-reliance, and lifelong learning. They also recognised the ambiguous nature of these concepts and proposed that curriculum in this area should include 'knowing' as a personal and positional act to engage with discipline-specific ideas; 'acting' which includes experiences of practice and engagement often connected to a particular form of knowing; and 'being' which involves developing a sense of self and acquiring the capacity to flourish.

Intangible personal characteristics are best aligned with this concept of 'being'. These characteristics can include self-confidence of one's knowledge and identity within a larger context that facilitates employability. However, there are considerable challenges when seeking to operationalize the act of 'being' within a curriculum. This learning often depends on individual personalities and previous experiences, and is often internalised through a process of self-reflection rather than externalised through outputs, thus it can be difficult to assess. In addition, developing a sense of self can require varying amounts of time, which do not always comply with university time frames.

Previous research has investigated the nature of intangible skills during short-term international study, which identified that adult student learning is often associated with 'personal growth', 'cultural awareness and sensitivity', 'self-awareness', and 'communication skills' (see for example Bennet, 2008; O'Reilly, et al., 2014; Potts & Berquist, 2014; Fenech, et al., 2013; Tucker & Weaver, 2013; Chieffo & Griffiths, 2004; Ingraham & Peterson, 2004; Gothard, Downey, & Gray, 2012; and Roholt & Fisher, 2013). A quantitative study with 1,200 students in the US examined intangible learning outcomes for study abroad and determined a common thread in student learning

encompassed intellectual growth, professional development, personal growth, skills for relating to culturally different others, and enhanced self-awareness (Ingraham & Peterson, 2004). Similarly, a study of 1,500 students also in the US investigated levels of intercultural awareness and personal growth gained by students during short-term study abroad programs (Chieffo & Griffith 2004). The study aimed to assess students' intercultural awareness and personal growth, rather than measure actual learning outcomes or changes in behaviour, (167) and reported that 27% of students commented on personal development about 'adaptability, flexibility, patience, responsibility, respect for others' (173). An Australian study employing focus groups with students participating in short-term study tours, also found that participants reported increased confidence and intercultural sensitivity after their experience abroad (Bretag, 2017). Such studies have broadened our understanding of intangible learning outcomes.

Research has also sought to identify specific assessment strategies that enhance cross-cultural learning, producing assessment formats that supported engagement with cross-cultural encounters (Leask & Carroll, 2011). Findings showed correlations between intangible and informal learning and proposed that formal and informal learning contexts were important to achieve learning success. The study suggested three ways to improve adult students' experiences of international learning: an alignment of the formal and informal curriculum; designing and managing specific tasks; and professional development for academic staff (p. 647). Further, it reinforced findings by the Australian Council for Educational Research (2009) that 'much learning at university occurs in the informal curriculum, outside formal learning environments and that these experiences can and should support the learning which occurs as part of the formal curriculum' (pp. 651-652).

Research conducted across three universities in Australia investigated intangible personal characteristics as learning outcomes (Gothard, Downey, & Gray, 2012). Employing quantitative surveys, events, workshops, and weblogs to record the reflections of 413 students about international learning experiences, the findings suggest that experiential and reflective learning was the key to effective experiences. The researchers looked at ways to improve students' skills in interpreting cultural differences, cultural orientation, and their capacity to learn from everyday interactions by being able to 'objectify these outcomes for

personal, pedagogical and professional development' (14). To attain this goal, the researchers designed ten experiential learning modules that addressed themes concerning the exploration, reflection, stereotypes, cultural relativism, communication, adaptation, transformation, globalisation and cosmopolitanism, education and culture (23). The researchers included three phases of learning: pre-departure, in-country, and re-entry, but focused predominantly on pre-departure, as nine out of the ten assessment modules were directed at this phase.

Over the past decade, research into short-term international study has progressed to include detailed investigations into the relationship between intangible skills and developing assessment. Yet, few studies have specifically addressed the task of fostering adult student awareness about what they are learning on study tours as an integral component in assessing their learning. This needs to be addressed to better understand the full potential of study tours for intangible learning and ensuring assessment tasks more meaningful. Therefore, this research seeks to offer a contribution to this gap. The following sections outline the study aims, methodology and methods, and findings.

Study aims

This study aimed to develop assessment practices that encourage awareness of intangible personal characteristics and soft skills for adult students within the creative industries disciplines. Although the *Outbound Mobility Best Practice Guide for Australian Universities* offers practical guidance on outbound experiences, it does not address assessment for study tours (AIM Overseas, 2010). In addition, existing links between learning outcomes, assessment tasks, and teaching techniques are often ad hoc and depend on an academic's perspective and specific discipline demands. Therefore, we used an action research framework to design and implement assessment modules that can effectively motivate students' participation and active engagement in the destinations they visited, to encourage self-awareness in immersive study situations, and to foster reflection upon the value of intangible skills for their personal growth and intercultural awareness.

It should be noted that this paper reports on specific findings from a broader research project that investigates learning opportunities and assessment strategies during short-term international study

experiences. The topics of the larger study include student expectations and motivations; the benefits and challenges for students; and the challenges of measuring intangible learning outcomes.

Educational action research methodology

The research team employed an action research methodology which involves a cyclical process of research, action and reflection. Coined in 1940 by Kurt Lewin, 'action research' describes an iterative process of testing theory through practical interventions and action (Kingdon, Pain, & Kesby, 2007, 10; McNiff, 2013). More specifically, this research is informed by educational action research as a way to transform pedagogical practices. In this sense, the researchers are also academic practitioners who led several of the study tours and/or coordinated them administratively. Educational action research enables the practising educator to inform their 'personal' practice through enquiry, investigation and research (Carr & Kemmis, 2009, 7). Carr and Kemmis postulate that educational action research is not as much about education, as it is for education. Action research is fundamentally participatory and holds that one must learn by 'doing'. It is therefore actively oriented and considers that knowledge is best acquired when driven by praxis, rather than disembodied theory (Bradbury-Huang, 2010; Stringer, 2007; Kemmis, McTaggart, & Nixon, 2016).

This research is framed within the social constructivist theory which suggests that cognitive development is reliant on the interactions between an individual and the environment. Within this framework, this research assumes that learning would be achieved by the "internalization of cultural knowledge and norms and the use of tools and signs of the culture" within an international context (Sivan, 1986, p. 211). Because the context of a study tour is a critical component of its design, it stands to reason that the learning is dependent on this context.

Using the action research process, the researchers first identified shortcomings with existing assessment practices during international study tours based on previous experience, the authors' research (source anonymised for blind review) and anecdotal feedback. Our university previously assigned two formal assessment items: a pre-departure group presentation that investigated the global sites to be visited, and a multiple-entry journal with a concluding 1,000-word reflective essay to

be submitted after the tour. The group presentation encouraged social bonding and directed student attention toward researching destinations to improve orientation. The reflective essay required adult students to reflect upon and critically analyse their experiences during a tour, using critical language and citing academic sources to support their insights. The journal aspect of the reflective essay expected students to keep records of their daily activities to be drawn upon for content in the essay.

Based on revisions with tour leaders and students, the research team determined that the journal as part of an on-tour assessment was not completely successful in fostering and assessing intangible and transferable skills. This was supported through two years of post-tour questionnaires administered with students from previous study tours. The results suggested there was limited understanding of the learning that adult students were experiencing in international study tours, which prompted a review of existing assessment practices.

In response, and as the first step of the action research, the research team designed, pre-tested, and implemented assessment modules to replace the reflective journal assessment to more effectively target intangible learning. The assessment was developed to foster student awareness of a range of soft skills they would encounter in study tours, and the intention was to initiate a selection of assessment modules for future utilization. The assessment modules were accordingly envisaged as scaffolds that would enable teaching staff to develop module content that would meet specific requirements for each tour. Due to the multiple disciplines covered by the study tours, the modules were not designed with a specific disciplinary lens but instead were meant to be broadly applicable. Experienced tour leaders and administrators provided the initial input for the modules, and additional information was gleaned from student surveys in previous years. Tour leaders were consulted and cooperatively enlisted to implement the new assessment. Fifteen modules were developed for use in 2016 and are described in the next section. Refer to figure 1 for an outline of the research process.

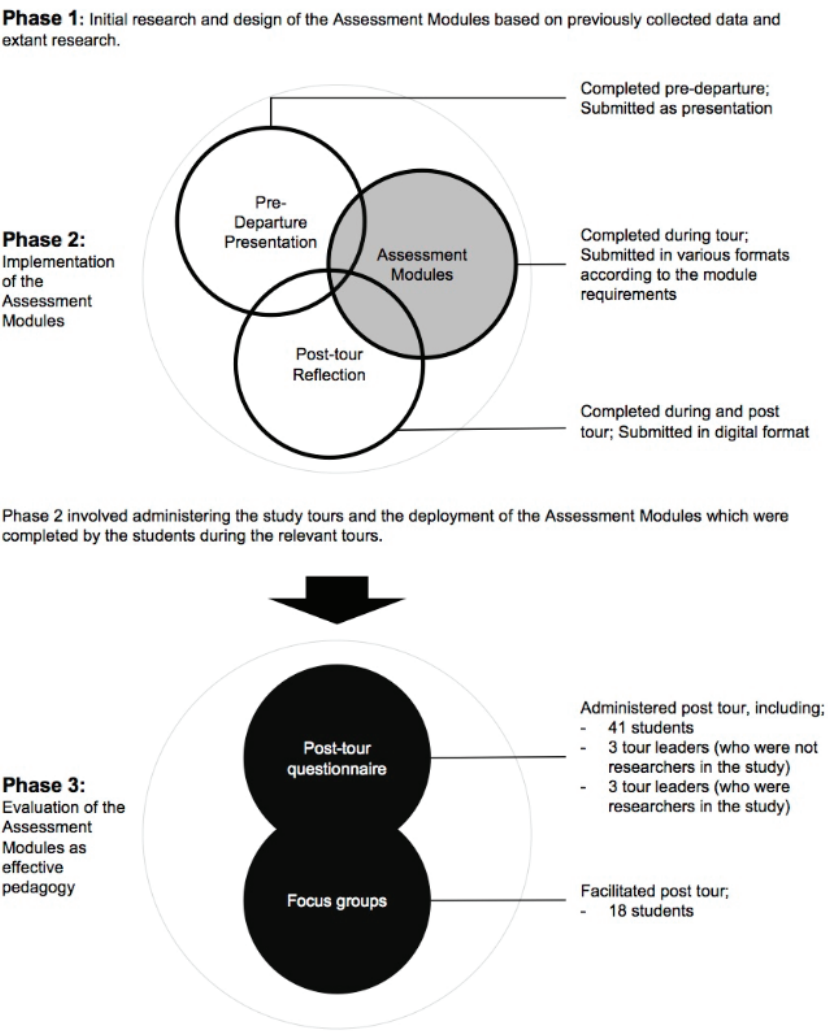

Figure One: Three phases of the research process

Development of assessment modules

The modules were designed to be completed quickly and relatively easily and were intended to encourage awareness of intangible learning. The

modules required individual and group activities and were designed to facilitate reflection on personal characteristics such as confidence, initiative, curiosity, resourcefulness, professional behaviour, cultural sensitivity, risk taking, and open-mindedness. Fifteen modules were designed, and each tour leader was required to select five modules that were most appropriate for tour location and student cohort. All students were required to attempt all modules unless there were extenuating circumstances (i.e. sickness). Figure Two lists the modules and the tour location.

Module Name	Tour Destination	Prescribed Task	Learning Outcomes												
			Initiative	Resourcefulness	Professionalism	Open-mindedness	Cultural sensitivity	Critical thought	Risk-taking	Curiosity	Creativity	Flexibility	Empathy	Time management	Confidence
	Florida Cruise	Write a 300-word critical review	●	●	●	●	●								
Cultural Context	Los Angeles	Try a new food or drink particular to the location	●			●	●								
Cultural Products	Nashville	Attend a performance and post a review on Facebook	●	●	●			●							
Expectations	Florida Cruise	Determine one strategy or advice that you plan to implement on tour and why	●	●			●		●						
Industry Communication	HK, Taipei	Research and ask 3 questions of industry professionals		●	●					●					
Industry Engagement	Florida	Engage in group mtgs with industry professionals and ask one question in 3 separate mtgs	●	●					●	●					
Industry Networking	Los Angeles, Nashville	Obtain 2 different business cards from industry professionals	●	●	●				●	●					
Keywords	NYC, Tokyo	Respond creatively to 3 separate keyword prompts in different public places			●	●					●	●			
Local Culture	HK, Taipei, NYC	Talk to a local, go to a local restaurant or attend a cultural event and document the experience				●	●			●			●		
Logistics	Florida, LA, HK, Taipei, Nashville, NYC, Tokyo	Organize and facilitate a tour event for the whole cohort	●	●	●	●	●		●					●	●
Wayfinding	HK, Taipei	Take 5 photos that best represent the route from the airport to the hotel	●	●					●	●					
Orientation	Los Angeles, Nashville, NYC	Find 5 to 8 different culturally significant locations via walking or subway and photograph them	●	●						●					
Test a Stereotype	HK, Taipei, NYC, Los Angeles	Discuss a preconceived stereotype in a group and then find examples that support or negate it			●		●						●		
Presentation Summary	Nashville	Attend a panel at the conference, summarize and post to Facebook.	●	●	●	●									
User Experience	Florida Cruise	Provide a written report addressing user-experience for cruise management	●	●	●	●	●								

Figure Two: List of modules, intangible learning assessed and tour locations

The modules were designated around themes, such as *orientation, stereotypes, keywords, planning and leading an activity for the student cohort, exploring and experiencing a local custom or new cultural context, industry networking*, and *industry engagement*. For example, the orientation module (as shown in figure three) required students to photograph and/or geotag well-known landmarks within a city, encouraging them to explore their new environment and become more familiar with its layout and public transport. Undertaking this activity required resourcefulness, curiosity and initiative. In contrast, the stereotype module required students to work in groups to reflect on a previously held *stereotype* related to a site's people, food, infrastructure, customs, or industries, and determine whether their attitudes or opinions had changed after direct contact with the subject of the stereotype. This module was designed to encourage students to reflect upon empathy and cultural respect.

STUDY TOURS
2:1 ON TOUR – NYC ORIENTATION

DUE
Sunday 13 November, Day 1 of the tour.

RATIONALE
Within an international context, you should be able to quickly orient yourself to particular places in an unfamiliar city. This includes being able to find your way through a new city, with a basic understanding of how the geography may impact the cultural milieux/character in different areas of the city. In addition, getting to an unknown location (for an interview or industry meeting) in a timely manner is a critical skill necessary for future employability. This module helps you build these skills, while helping you explore New York City with the support of your peers.

LEARNING OUTCOMES FOR THIS MODULE
Resourcefulness; curiosity; initiative

REQUIREMENTS
In groups of three or four, go to five specified locations around the city, take a photograph that represents the brief at this location, upload and geotag to *Instagram* for submission.

DETAILS
In any order, go to all of the below locations and take a photo of something that represents your current understanding of NYC as a creative place. These photos should in some way express your curiosity about gaining a better understanding of this place while engaging in the study tour. Required locations:

1. Times Square
2. Central Park Zoo Entrance
3. The Chrysler Building
4. *Charging Bull* Sculpture on Wall Street
5. The Flatiron Building

Upload the five group photos to Instagram, geotag the location of your photograph, and include the hashtag # (anonymized). Once you have uploaded all required photos, meet your tour leaders at the CSI seminar meeting space for the introductory seminar at 10am on Day 1. You will have a chance to reflect on this activity and discuss the challenges you experienced while undertaking this task.

SUBMISSION
5 photos uploaded to Instagram with Geotag locations and #(Anonymized) for each photo.
Meet at the CSI meeting space at 10am to discuss.

GRADING & WEIGHT
Satisfactory or Unsatisfactory for each criteria
2% of your total mark
Individual assessment

CRITERIA
All members of the group must:

1. Upload 5 photos that demonstrate the brief, geotagged within 200m of each designated site *(initiative, resourcefulness, curiosity)*
2. Meet at the designated location on time *(resourcefulness, initiative)*

STUDY TOUR ASSESSMENT 2:1 ORIENTATION SEMESTER 2 2016 PAGE 1

Figure Three: Example of assessment module

Other modules focused on *industry experiences*, including the *networking* module which required students to collect business cards from professionals they met during a tour and the *industry engagement* module, which required students to ask questions from industry practitioners who spoke to the group. These modules prioritised confidence, initiative, professional behaviour, communication and conduct, resourcefulness, and risk taking.

Evaluation of assessment modules

After the study tours ended in 2016, the authors used questionnaires and focus groups to evaluate the effectiveness of the modules. The questionnaires were designed to determine if students were becoming more aware of intangible learning through active engagement in tour activities rather than measure the rate of change or progress of learning due to assessment. In early 2017, approximately two months after completion of the tours, the researchers administered a follow up questionnaire with participating students (N=41) immediately following the study tours and facilitated two student focus groups to collect qualitative data (N=18). Participating students were enrolled in an undergraduate degree program and were predominately in their final year of study. They spanned a range of ages from 20 to mid-forties, but were most often between the ages of 21 and 24 years of age. In addition, three tour leaders who were not researchers on this project completed a questionnaire, and three of the researchers who also led tours completed the questionnaire in order to reflect on their experiences.

The two questions focused on the modules were analysed to assess their effectiveness. Q1: *Did the modules on tour support your intangible learning?* and Q2: *What was your overall experience of the modules? Please describe*. The students' open-ended responses were analysed using multi-phased thematic coding (Bauer & Gaskell, 2000; Flick, 2006), which incorporated open-coding to identify consistent themes, followed by axial coding to develop more specific themes (O'Reilly et. Al., 2014; Boyatzis, 1998). Where possible, the results are presented as specific percentages in the findings section based on this analysis.

In early 2017, a researcher (who did not lead a study tour) conducted focus groups with 18 students to gather more in-depth views of the modules and how they impacted their experiences and learning on

the tour. Students were asked to gauge the impact of the assessment modules in relation to the degree of difficulty they experienced, and whether they believed the modules had enhanced their overall learning experience. The focus groups were recorded and transcribed, followed by a thematic analysis of the data using a similar process to that of the open-ended survey questions. Due to the qualitative nature of focus groups, the results are presented in the findings section in general terms based on this thematic analysis. They were semi-structured, and initial questions included:

- *Which modules best assisted your learning while you were on the study tour, and why?*
- *Are there any modules that didn't assist your learning, and why?*
- *Do you see any benefits of completing these modules while on a tour? If so, what?*

At the staff level, a questionnaire was sent to tour leaders (N=6) requesting feedback about the value and impact of the modules for assessment. The questionnaire resulted in short answers which were thematically analysed using the same open-coding and axial coding process as stated above. The questions included:

Q1: Did the module assessment enrich the tour experience for students?

Q2: Did the module assessment make students more aware of existing intangible learning?

Q3: Did engaging with the modules create more work for you on tour?

Q4: What suggestions would you make for improving the modules in the future?

Although it was impossible to triangulate the results of the three data collection methods given the small sample size for staff, the researchers were able to develop a comprehensive understanding of the value of the modules. The next section discusses the findings.

Findings

Tour leader perspectives

The tour leaders believed the modules generally enriched the study tour experience for adult students and helped them become more active and reflective learners. The modules directed at individual activities enhanced students' reflections about what and how they learned while travelling, and modules aimed at group tasks served to improve interaction and solidarity. The group modules also fostered discussions between group members, entrenched the relationships students established in the pre-departure assessment group presentations, and gave a greater sense of belonging for those who had previously not bonded with other students. Five (out of six) of the tour leaders believed that the modules both complemented and enriched conventional academic assessment items because they precipitated more reflection about a variety of learning experiences.

The tour leaders raised a number of key themes in respect to their experience of the modules:

- *Staff perceived that students were more active in their approach to learning;*
- *Staff perceived that students had little trouble completing module assessments;*
- *Staff believed that adding modules was easily integrated into the pre-existing assessment.*

All six tour leaders agreed that the modules were effective in alerting students to the nature of intangible personal learning outcomes and encouraged them to think more deeply about this type of learning (question two). Tour leaders also referred to the positive impact on building students' confidence, improving initiative, and making them more open to engaging with new experiences (involving risk taking and open mindedness). However, there is room for improvement, as two tour leaders stated the keywords module was somewhat vague, making it challenging for students to comprehend and for staff to facilitate.

Despite the positive benefits, half of the tour leaders surveyed believed the modules generated slightly more work for them and their students

(question three). One stated there was additional work only in particular areas, while two out of six stated they did not do any additional work. The extra work for some tour leaders involved explaining the modules and answering questions about them as most students had not undertaken this kind of task before, and facilitating and assessing the modules on site. Two tour leaders reported minor logistical difficulties with recording and verifying student responses and their completion of tasks with multiple components on site.

Tour leaders offered a range of suggestions to improve the modules (question four). One leader wanted additional flexibility to tailor the module design to suit the needs of their particular tour and noted there are a variety of destinations and disciplines that would require unique attention. One leader wanted to increase the number of modules per tour because they believed they were more effective at generating learning than the academic reflective journal. Yet, other leaders asserted there were slightly too many modules (5) for a two-week tour.

The next section discusses findings based on student input.

Student perspectives

The majority of students (based on focus group discussions) believed the modules had a beneficial impact on their intangible learning skills and could be applied to industry and career contexts in the future. Overall, students reported gaining most from the modules when *tour leaders explained the relevance of the activity*; when the activity was *well integrated into the tour;* and they had *knowledge about their destination city before arrival.*

A majority of students also had a positive experience of the modules (question 2). As indicated in Table One, students used terms such as enjoyable, good, beneficial, interesting and helpful to describe their experience of the modules. However, some respondents offered a critical assessment of their experiences and used words such as annoying, unnecessary and unpleasant.

Terms		
Positive	**Negative**	**Neutral**
Easy	Vague	Mild
Beneficial (3 times)	Unpleasant	
Fun	Confusing	
Engaging	Unorganized	
Relevant	Annoying	
Practical	Redundant	
Achievable	Unnecessary	
Challenging		
Enjoyable		
Concise		
Good		
Interesting		
Brief		
Helpful		
Really great		

Table One: Student terms describing the modules

Based on the post-tour questionnaires, students overwhelmingly thought the modules supported their learning and the acquisition of intangible skills (question 1), as one student stated, *"I believe this is a great way to build values and skills"*. Of the 41 respondents, 32 (78%) gave a positive response, three indicated a negative experience (7.3%), and four were neutral (9.8%). Two students did not respond. Positive statements included, *"Seeing and experiencing the culture there through the modules aided my curiosity, tolerance and open mindedness"*, and one neutral student, stated that the modules *"helped me to further think about what I'd learnt, but not much"*.

Some students believed that a few modules were unfocused and hard to understand. One student indicated that other elements of the tour were better able to support intangible learning than the modules, suggesting, *"Some modules acted to reinforce such intangible learning, but it was the guided and independent experiences on the tour that really supported learning"*.

In addition, some key themes were raised in the focus group discussions, including:

- The need for a *balance* of student effort required;
- The *context* of the module activity, including the mode of delivery and the location, should be carefully considered;

- The modules assisted with *retaining knowledge*;
- The modules enhanced *awareness of intangible skills* and personal characteristics;
- *Careful explanation* of the modules is necessary; and
- The modules fostered *collaboration* and group discussions.

The modules require a careful balance

A sense of balance between the simplicity and complexity of module tasks was significant in relation to the perceived benefit of the activity. If a module was too complex it often led to confusion, and if it was too simple some students became disinterested. Statements regarding module simplicity as a positive factor included, *"I like to think that if it was any harder ... it would take away from the cultural experiences that you were going to get if you spent all your time doing work ... so I reckon it was a good balance"*, and *"There was a nice balance between work and play so I wasn't stressed about assessment the whole trip"*.

Students generally thought the number of modules was reasonable and easy to complete. When asked to rank the ease of module completion between one (easy) and five (difficult), most identified it as very easy, rating it one out of five. Students found some module activities more challenging, ranking them two or three out of five. Comments included, *"I would say generally that most of the tasks were fairly easy to complete. I didn't find any of them a huge struggle"* and *"I think that all of our tasks in our situation were easy. I just had to sit down for 10-minutes and concentrate on this as opposed to going and doing other exciting and engaging things. Still very enjoyable, but easy"*.

The context of the modules is important

The design of modules needs to carefully consider the *context, mode of delivery, and location*. For instance, one module required students to exchange business cards with professional practitioners, but many did so merely as a collecting exercise, and some students felt it would have been more valuable if they had been given extra time to converse with speakers. Some students also said they did not have enough time to complete modules and felt the process was too rushed. For example: *"There were more things planned than what we could handle. The activities, or the*

tasks themselves, weren't necessarily hard but I just found them difficult because we always had a time limit, always rushed".

Another student would have liked to discuss the modules in pre-departure tutorials. This was a reasonable request, but certain modules were designed explicitly to forgo preparation time so students had to learn on the ground and rely on their initiative.

Modules aided in the retention of knowledge enabling students to focus on learning

One significant benefit of the modules was that it focused students' attention on acquiring skills for study and beyond, not entering the tour as a leisure activity. Comments to this effect included, *"Just staying on track and reminding yourself that it's not a holiday, that you're actually here to be learning as well"*. Students also believed the modules helped them retain knowledge and improve their learning, as with the following comments: *"When we worked together, teamed off, investigated different elements, came back together to consolidate our information, that was a really good way of learning"*.

Many students appreciated the more activity-based learning enabled by modules in contrast to conventional academic formats. Comments made about the active and immersive learning fostered by modules included: *"It was a completely different way of learning for me … I'm so textbook … it was definitely experiential learning and I found that really helpful"* and *"You ended up retaining more knowledge having actually experienced it, learning it and discussing it. It felt more natural. I thought it was better than having to write it all down"*.

The modules fostered the awareness of intangible skills

Students commented on the *general awareness of enhanced skills in intangible learning* relating to resourcefulness, initiative, flexibility, curiosity and open mindedness. When given a specific list of intangible skill options, one student commented, *"initiative and flexibility were probably the most integrated into our general activities"*.

Individual modules enabled active learning that fostered initiative, risk taking and resourcefulness. For example, the orientation module was extremely helpful for students adapting to life in a new city, as one

student stated: *"the [orientation] one ... was really helpful ... learning how to get around and feeling confident"*.

Industry-focused modules that required the exchange of business cards with industry professionals, or to ask questions of speakers, and to be aware of professional behaviour were also popular. Students noted becoming more aware of professionalism, curiosity, tolerance, initiative, open mindedness, resourcefulness, flexibility, empathy, cultural humility, and risk-taking. The modules also improved confidence levels and fostered leadership skills when actively engaging with a new environment.

The modules aided group discussions among students

A number of students expressed appreciation for modules that fostered interaction and discussion, placing considerable value on de-briefing and group reflection during discussions in order to learn about peers' views, such as: *"We did a lot of reflective talking together which was really good ... it was nice to compare notes about our experiences"*. The group-focused modules promoted shared learning and reinforced group identity. Some students reported that the modules also improved their skills in critical reflection, as *"They made me think about what I was experiencing and really evaluate and reflect on the activities"*. This demonstrated that such modules successfully supported conventional academic learning outcomes associated with reflective analysis and critical thinking and supported students' awareness of their intangible skills and how they might be utilized while exploring a new environment.

Negative experiences of the modules

Despite the generally positive experience with the modules, some students suggested changes to the modules or commented on ones that did not work well. For example, several students requested a stronger industry focus or more discipline specific activities: *"Maybe you could have core modules relating to the industry stuff that everyone has to do and then have extra credit modules, or something like that"*. The keywords module and some planning activities did not work well, and there was a mixed response to modules that required students to try new food. As one claimed, *"the module in regards to eating something new ... I feel like that's something you would do anyway while you are there, so maybe change it to more industry related"*.

Some of the modules were deemed to be disorganised or vague and students wanted more direction and explanation about the rationale for the modules and the expected outcomes. This can be rectified in future study tour assessment by alerting staff to the importance of contextualizing the use of module assessment for enhancing student awareness of intangible learning.

Discussion and conclusion

This research has found that the participating creative industries students experienced significant transformations on professional and personal levels during their study tour. This supports findings of study abroad experiences proposed by O'Reilly (2014) who suggested, 'International experiences can be transformative in nature as they may impact both personal and professional attitudes as well as extending an individual's global perspective' (57). Student awareness of intangible learning experiences is an important factor in facilitating these transformations. This research contributes to a greater understanding of intangible learning and how it can be facilitated and assessed. Moreover, adult students reported that their experiences were transformative in ways directly related to the awareness of transferable skills and personal characteristics.

Adult students revealed new insights into their personal growth and reported awareness of confidence, resourcefulness, tolerance, initiative, curiosity and greater maturity. These attainments go hand in hand with other intangible and transferable employability skills such as open-mindedness, curiosity, cultural respect, empathy, adaptability, time management, organization, leadership, confidence, creativity, and cognitive flexibility. One student described the benefit of these changes, *"It was probably the best experience of my life. I've always been such a quiet person, and so very shy. So, when I did this, it was like coming back in a leadership role"*.

Designing assessment that facilitates students' understanding of intangible skills and personal characteristics, however, remains a challenging task. As this learning is inherently personal and subjective, it is not always clearly exhibited in student behaviour. Nonetheless, the assessment modules trialled during this research were intended to primarily support students' awareness of acquiring new skills. Students expressed satisfaction and the belief that gains in such learning enhanced their travel experience and

supported skill development in reflective and critical thinking. A limitation of this study is that only self-reported reflections provided by the students were used to determine their experiences. Additional methods, such as experience sampling technique in which a person records their feelings or experience at specific moments in order to link them with circumstances and situations, could be beneficial (Napa Scollon et al., 2009).

This type of transformation has been reported in other research, noting that feelings of personal transformation transcend 'achievements such as passing the course or obtaining a degree, to a level of personal and professional maturation that positively impacts society in an altruistic humanitarian way' (Walters, et al., 2016, p. 11). Dwyer (2014) found that 95% of students reported increased self-confidence and maturity (Dwyer 2004a and b; Potts and Berquist, 2014). Similarly, Fenech et al. (2013) observed that students gained 'improved awareness of global issues, and increased self-confidence and self-esteem' (458) and Tucker and Weaver (2010) observed improved student confidence. However, questions remain about the extended nature and scope of intangible skills associated with international study and their potential long-term effects. This is a limitation of the current study. Future research needs to investigate the long-term impact of study tours on students and if the intangible skills are beneficial to their future practice.

Students also expressed enthusiasm for working in groups and their willingness to hear about others' learning experiences during study tours as an outcome of completing the assessment modules. Other research suggests that group work is beneficial because it enhances the development of skills similar to real world practice (Fearon et al., 2012; Fellenz, 2006). It provides an opportunity to practice collaboration and negotiation. This suggests that future assessment modules should include additional group activities in order to foster social learning and capitalise on student enthusiasm for this pedagogical style. However, further research is warranted into group learning during study tours since other factors may also impact the student experience, including personality types and levels of introversion.

Findings of this research can assist the design of study tour assessment that enables adult students to focus on the nature of their intangible learning during an international short-term study tour. This study also highlights the potential significance of immersive assessment modules that provided

specific ways for students to engage with their host country and the cultural differences to which they are exposed. The modules heightened awareness of intangible and transferable employability skills such as open-mindedness, curiosity, cultural respect, empathy, adaptability, time management, organization, leadership, confidence, creativity and cognitive flexibility. Although more work is needed in this area, this is a positive step in ensuring students within creative disciplines can more readily experience the benefits of international study experiences.

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Book review

Contemporary theories of learning: Learning theorists… in their own words

Knud Illeris (ed.)
Routledge, Abingdon, Oxon, 2012
ISBN 978-0415473446
265 pp.

Reviewed by Cheryl Ryan
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The title of this book and the author's long-standing, internationally acknowledged innovation in the field of learning theories captured my attention and professional interest. Knud Illeris is Professor Emeritus of Lifelong Learning at Aarhus University, Denmark.

The Introduction establishes the purpose, focus, and justification for Knud Illeris's changes to this second edition. Firstly, he addresses the contemporary context and parameters of his selection of theorists and theories, shifting the beginning boundary from 1990 to 1995. This decision is based on his 'opinion' that significant contributions were made to this field in the 'last five years of the 1990s' (ix) by theorists such as Jerome Bruner (1996), Robin Usher (1997) and Etienne Wenger (1998). Secondly, two authors – Bente Elkjaer and Mark Tennant – from

the 2008 first edition, have provided writings of their new work. Illeris then explains his choice of four new authors invited to contribute to this edition. In particular, he describes Sharan Merriam's contribution 'as making good a deficiency in the first edition' (ix). The other authors – Carolyn Jackson, Gert Biesta, and John Hattie and Gregory Donoghue – make new contributions to this edition that illustrate the work that continues to be done in this field. Knud Illeris reiterates the understanding of 'learning theory', as outlined in the first edition, and notes the omission of 'system theory' or 'brain research' because 'their foundation and point of departure are taken outside the area of what is usually regarded as the field of learning' (x).

The book comprises 18 chapters, presented in line with Illeris's dimensions of learning: 'content, incentive and interaction' (p.4). These dimensions and two processes of learning – 'interaction' and 'acquisition' – are detailed in chapter one where he presents his work on a model of human learning. Chapters two to seven address key concepts and models of the field of learning. Peter Jarvis explores the notion of 'learning to be a person in society'; emphasising the existential and experiential nature of learning, and the interplay of mind and body. Robert Kegan explores a 'constructive-developmental approach to transformative learning'. Yrjö Engeström explains 'expansive learning' and cultural-historical activity theory (CHAT), providing excerpts from a case study to illustrate the application of the model. Bente Elkjaer draws on Dewey's 'pragmatism' to understand human experience and knowing. Sharan Merriam's chapter examines adult learning theory with a focus on future directions. In their chapter, Hattie and Donoghue present a model of learning promoting a range of learning strategies.

Chapters eight and nine focus on the content dimension of learning, featuring Jack Mezirow's transformative learning and Howard Gardner's multiple approaches to understanding. The incentive dimension of learning is presented in chapters 10, 11 and 12 starting with Carolyn Jackson's affective dimension, Peter Alheit's biographical and lifelong learning, and Mark Tennant's the life history and the self.

The next five chapters focus on the dimension of interaction. Cultural context is the focus of chapters 13, 14, and 15, drawing on Jerome Bruner's 'culture, mind and education', Robin Usher's 'experience, pedagogy and social practices', and Thomas Ziehe's exploration of

the context of 'cultural convictions' and 'normal learning problems in youth'. Chapters 16 and 17 address the social context of interaction, with Etienne Wenger's social theory of learning and Danny Wildemeersch and Veerle Stroobants explore 'transitional learning and reflexive facilitation' in workplace learning. The final chapter in the book by Gert Biesta brings a critical lens to the philosophy and politics of learning.

As much as I want to, I cannot give a detailed overview of each chapter, however, I will share key insights from two chapters: Knud Illeris's chapter 'A comprehensive understanding of human learning'; and 'Affective dimensions of learning' by Carolyn Jackson.

Knud Illeris's chapter details the development of his model of learning; a model that supports an integrated, holistic approach to learning. It is easily accessible to a novice of learning and learning theories, and his discussion foregrounds a number of key concepts relevant to understanding how humans learn. Illeris uses examples from school classrooms, youth education and re-training low-skilled workers to illustrate the application of his model and philosophical approach to learning.

The model comprises two processes, one external – 'interaction' – involving the individual and the environment, and the other internal – 'acquisition' – involving the individual managing their learning and motivation. The complete model comprises three dimensions of 'content, incentive, interaction' (pp.3-4). First glance at the content dimension, knowledge and skills come to mind. However, Illeris extends this dimension beyond knowledge and skills to include 'opinions', 'meaning', 'values, ways of behaviour … strategies' that support the learning and development, or what Illeris refers to as 'personal *functionality*' (pp.3-4, emphasis in original). The incentive dimension encompasses 'feelings, emotions, motivation' supporting *'mental balance'* and *'personal sensitivity'* (p.4, emphasis in original). '[P] erception … experience, imitation, … participation …' are identified as elements of the interaction dimension that may prompt and support learning. Illeris describes this dimension in terms of 'the personal integration in communities and society' and the development of the 'sociality of the learner' (p.5, emphasis in original). Illeris uses an example of a chemistry lesson in a school to illustrate the application of his model of learning, and in doing so, he defines four types of learning: '*cumulative*', '*assimilative*', '*accommodative*' and '*transformative*'

(pp.7-8, emphasis in original). He also identifies and explains barriers to learning such as '*identity defence*', '*ambivalence*', and '*mental resistance*' (pp.8-10, emphasis in original). In concluding, he argues that for learning to be meaningful and effective in a holistic and integrated way, all three dimensions need to be addressed, along with the types of learning, consideration of barriers to learning, and internal and external environments and conditions need to be identified and addressed.

Carolyn Jackson is Professor of Gender and Education at Lancaster University, UK. I was pleased to read her chapter on affect and emotion in learning, and I applaud her research of fear and anxiety in education with a focus on schools and universities. Her approach in addressing the affective dimension of learning is instructive and is relevant to everyone involved in teaching and learning and education across a range of settings. I certainly see its relevance to pre-service and initial teacher education and teaching and learning in higher education. I especially appreciated Carolyn Jackson's reference to a quote by Newton (2014, x) at the beginning of her chapter: 'In the classroom there sits an emotional elephant that many try to ignore'.

Jackson sets the context well, describing schools as 'emotional places' (p.139). She argues that the discourse of standards in education has placed 'attainment rather than experiences of schooling' at the forefront of policy development (p.140). She acknowledges the primacy of affect influencing all aspects of learning, and yet it is ignored. Carolyn Jackson also acknowledges the challenges associated with understanding and defining 'affect, emotions', however, she draws on others' work in providing a detailed outline of affect and emotion that is highly informative and relevant to her work and research. Of particular note, is Jackson's reference to Hascher's (2010, p.14) research identifying five components of emotion and eight indicators to analyse emotions (pp.141-142). Further to this, Jackson defines anxiety and fear, drawing on the work of relevant authorities.

The heart of her discussion rests in the rich and textured presentation of her research (including excerpts of data) of high school and university students' experiences of fear and anxiety. Her research is tied to the contemporary prevalence of individual learner and school-based testing regimes. It will not be a surprise to readers to learn that anxiety about 'academic failure' associated with tests and exams, and especially those

'used to rank schools publicly' were the source of much anxiety (p.145). Her research showed correlations between students' experiences of fear and anxiety and their development of 'defensive strategies' that resulted in the likelihood of 'failure or disengagement' (p.145). Jackson notes in her conclusion that she did not have space to address the methodological difficulties she experienced researching the affective dimension of learning. This will prompt many educators to seek out more of her work.

Carolyn Jackson argues for greater attention to the affective dimension of learning in research and in practice. Significantly, the need for comprehensive research of fear and anxiety from multiple perspectives: individual/learner, classroom, school or institution, national and international policy and curriculum. Through a Foucauldian lens, an examination of the power-knowledge relations: who and how fears are constructed, and who benefits and who loses.

I believe this book is an excellent resource for teachers, lecturers, adult educators and workplace trainers, and for students of education and adult learning. It provides textured, accessible and foundation-building insights to a range of theorists and their theories of learning in one volume; as the subtitle of the book highlights: learning theorists … in their own words.

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