

FROM THE PRESIDENT

Our recent annual conference was an outstanding success. It was a timely reminder of the volatile context in which we operate as researchers and the need for us to be constantly thinking through how we conduct research that both expands knowledge and impacts on policy and practice. This is was strong theme that ran through a number of the presentations during the conference; it was also taken up in an interesting Panel discussion led by Roger Harris. The panel discussants were presented with the provocation that listed a number of perceived problems that government and industry bodies have with research in VET (e.g. research is unintelligible to them, inconsistent with their priorities and often running counter or antagonistic to their goals). The discussion that followed was wide ranging and it provided a useful set of ideas which I think are worthy of further reflection if we are to build stronger connections between research, policy and practice.

It was clear that what constitutes relevant research is certainly 'in the eye of the beholder'; research can be used for many purposes – promoting debate, encouraging new thinking, contributing to decision making (evaluation research is a case in point here) as well as informing policy and practice. Being clear about the purposes of our research is an important first step in building connections between research, policy and practice.

A second theme that arose in the discussion revolved around the nature of the research that 'counts' in the policy and practice communities. This concern is wider than the debates that often occur around 'hierarchies of evidence' (i.e. seeing randomised control group studies as the 'gold standard' or the older qualitative versus quantitative debates). VET, with its arguably strong oral culture and its ever-changing landscape, does not readily lend itself to long term systematic studies that would lead to the sorts of evidence that sometimes seems to be desired by policy makers. Under resourced and time poor professionals may not be able to take research findings and use as they would like to.

A third theme that arose was around the differences that exist between the research community and the policy and practice communities. While they may share similar

goals (for example to enhance the quality of VET provision) they have different cultures. These cultures can be seen in the different languages that are used in each domain, different priorities for what they need to know, different time frames for action and the different types of work that each of these communities undertake. We were reminded that policy makers and practitioners have their own knowledge systems. For example, practitioners have the knowledge that is generated from their work in specific contexts and their reflections and interactions with students and industry; policy makers have their knowledge generated from the wider policy context and the organisational contexts in which they work.

It follows that the types of knowledge that are important to the policy and practice communities may be different to the knowledge that might be valued by the research community. Industry and practitioners may be looking for better solutions to problems (e.g. in terms of being more effective or perhaps efficient), knowledge that is practical and able to be 'tried' in some way. Policy makers on the other hand are likely to value knowledge that is unambiguous, well argued and readily available, readily able to be accommodated within the current political agendas and which will help to facilitate change in ways that are practical but will not lead to them being 'bolted' into changes that cannot be modified or undone as priorities change.

Working to bridge these two cultures using the processes of knowledge mobilisation is important. Knowledge mobilisation aims to bring together policy makers, researchers and practitioners. Collectively they develop processes and practices which encompass the entire research process (not just activities that come after the research has been completed) and address issues such as examining the types of evidence that might be needed to inform decision making and the uses to which research might be put in order to come up with actions that will result in change (i.e. impact for the research and outcomes for practitioners and policy makers).

The VET sector is extremely fortunate to have the NCVET who routinely enact what is considered to be many of the best practice features in relation to

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Towards more effective continuing education and training

A team from Griffith University's Adult and Vocational Education program is currently completing a three-year research project to identify and evaluate potential models and practices that might constitute a national approach to continuing education and training (CET). The research is being funded by a grant from the National Vocational Education and Training Research (NVETR) Program, which is coordinated and managed by NCVET on behalf of the Australian Government and state and territory governments.

CET is emerging as a priority for the nation's vocational education and training (VET) system because of changes such as new work requirements and practices, an ageing workforce and lengthening working lives. The motivation for this research was a concern that the arrangements for entry-level training, which currently dominate vocational training provisions in Australia, may not be well aligned with the purposes and practices of CET (see Billett et al, 2012a). This concern is shared across many countries (OECD, 2012) and

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extends to considerations of how VET systems might change to be responsive to address this concern (CEDEFOP 2009). Included in provisions of CET are vocational education and training programs offered through registered training organisations (RTOs) and other educational institutions, intentional workplace learning experiences, and individuals' learning through their work independently or with others (e.g. co-workers, supervisors, experts).

Earlier reports on the project (Billett et al, 2012b, Billett et al, in press) present and discuss how a number of models and practices of CET were assessed and refined through interviews and short surveys undertaken with almost 140 workers and more than 60 managers in five industries and across four Australian states. That process resulted in the

identification of four models of continuing education as the most preferred and effective by those directly involved as workers and supervisors in learning within organisations. The four models are shown in Table 1.

Together, the four models offer a range of preferred means of providing effective CET for particular purposes, as reported by workers, managers and RTOs, and hence they provide a platform for the provision of continuing education and training nationally. The models can be utilised individually or collectively, depending on the particular circumstances, and the choice is based on which model is most appropriate for a particular purpose.

Recommendations

The four-model CET platform advanced through all three phases of this project provides options for more effectively meeting workforce development demands and sustaining Australian workers' employability across working lives. However, to optimise the effectiveness of such a provision it is recommended that:

1. Together, the four models of provision and support identified in this study become the platform for national CET provisions. Each makes different contributions, but collectively they comprehensively address the range of purposes required for supporting workers' on-going learning to support employability, including career advancement and change, workplace imperatives and workforce development.
2. National administrative and regulatory requirements i) acknowledge that, for most CET purposes, workers learn effectively in and through work, and ii) be modified to allow for greater inclusivity in how workers' learning is provided and supported through their work, including those in rural areas.
3. RTOs and VET professionals be supported in professional development activities that will enable them to further develop the skill sets required to promote, facilitate, assess and certify learning in workplace settings.

Table 1: Models of effective continuing education and training

Model	Summary description
1. Wholly practice-based experiences (i.e. on-the-job)	Learning across working life through practice-based experiences, in the course of everyday work activities and interactions, learning on one's own or indirectly, and/or supported by more experienced co-workers.
2. Practice-based experiences with direct guidance (e.g. mentoring, demonstrating)	Individuals' learning at work supported by the direct guidance of more experienced co-workers or supervisors through joint work activities and engaging in supported activities for learning that cannot be acquired without the assistance of more experienced workers.
3. Practice-based experiences with educational interventions (e.g. applying classroom-taught theory to workplace activities; action learning, project work)	A process of learning which combines learning undertaken through workplace activities and interactions supported by expert input from trainers either on-or off-site, or using projects, such as in action learning, to extend this learning and enhance practice aspects of work. The learning is often accredited and leads to certification.
4. Wholly educational institution-based experiences	Some continuing education and training is through programs based in educational institutions or offered online by those institutions. The experiences provide the kinds of learning individuals require for specific goals, such as changing occupations or developing new skills that cannot be learnt through current work.

4. In addition to preparing managers and supervisors to be coaches, mentors and assessors, they be assisted to make informed decisions about the kinds of CET they sponsor, preferably as part of a broader model of enterprise development.
5. Workers' learning needs, preferences and motivations to learn be recognised as the central elements of effective continuing education and training provision, and efforts to promote learner engagement be a feature of CET provisions.
6. Workers be assisted to develop more effective strategies to advance, direct and engage in intentional learning experiences, and to recognise the value of practice-based work experiences, and be encouraged and rewarded for being pro-active learners.
7. The four models of provision and support identified in this study be regarded as the platform for workforce development strategies, thus allowing for greater alignment of individual learning needs, employer's skill requirements, and the expertise of training providers.

Implementing these recommendations should assist workers to acquire the kinds of experiences and expertise that are valued by industry, and maintain their employability across their working lives, as well as enhancing partnerships between training providers, workplaces and employees; and contribute significantly to workforce development and productivity.

The final report on the project should be available on the NCVET website in due course.

Further information

For further information, or to arrange a presentation and discussion of the findings, please contact: Professor Stephen Billett (s.billett@griffith.edu.au), or Dr Sarojni Choy (s.choy@griffith.edu.au)

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knowledge dissemination and mobilisation out of our research. One of the goals of AVETRA as an organisation is to do more in relation to knowledge mobilisation – our current emphasis on Practitioner Inquiry and the development of our Practitioner Hub are two examples of our emerging activity in this area.

Researchers can offer much by way of support to help bring about the change that can potentially arise from research – but it also requires commitment from organisations, practitioners and policy makers as equal partners in this endeavour. All parties need to work towards establishing a culture that is responsive to change and carries with it the necessary cultural awareness of the different 'worlds' that researchers, policy makers and practitioners inhabit, the knowledge needs of these different groups and the different capacities each has to offer in putting the outcomes of research into action. However, all of this needs to be undertaken with a degree of pragmatism. Research is more likely to

impact on policy and practice in indirect ways, and that research evidence however compelling, must compete with a large array of other influences on policymaking and practice (Selby Smith 2006). The nexus between research, policy and practice is an uncertain space which is subject to many influences but one that is well worth taking the time to traverse.

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Facilitating the transition of Aboriginal and Torres Strait Islander students to Higher Education

On 27 March 2014, the Nulungu Research Institute-led research project entitled **Can't Be What You Can't See: The Transition of Aboriginal and Torres Strait Islander Students to Higher Education** was officially launched by Mr Rod Little at the 50th anniversary AIATSIS National Indigenous Studies Conference in Canberra. The Nulungu Research Institute is located on the University of Notre Dame Australia (UNDA), Broome campus, a dual sector provider offering VET, undergraduate, post graduate and research-based degrees. The campus began, 20 years ago, solely providing VET, and has seen significant numbers of students, both Indigenous and non-Indigenous, articulate from Certificate II and III courses all the way through to post graduate study.

This particular research was commissioned and supported by the Australian Government through the Office of Learning and Teaching (OLT). The project sought to identify key enablers and constraints for Aboriginal and Torres Strait Islander students in transition to higher education with a specific focus on models of successful transitions relating to access, participation, retention, and completion. The work was a collaborative effort from staff from the Nulungu Research Institute, the Sydney UNDA School of Education, the Academic Enabling and Support Centre on the UNDA Fremantle campus, in conjunction with colleagues from Southern Cross University and the Bachelor Institute of Indigenous Tertiary Education.

The VET Sector attracts more Aboriginal and Torres Strait Islander students than higher education. However, the number of Aboriginal and Torres Strait Islander students continuing on to higher education through the VET system has declined slightly since 2006. In 2012, 33.6% (35.9% in 2006) of Aboriginal and Torres Strait Islander students were enrolled in further study six months after completing VET training: 4.9% in university study (8.8% in 2006), and 7.8% for non-Indigenous students (7.4% in 2006); 19.9% at a TAFE institute; and 11.3% with private providers (National Centre for Vocational Education Research, 2013). DIISRTE (2012) highlighted that VET enrolments better reflect Aboriginal and Torres Strait Islander

In 2012, 33.6% (35.9% in 2006) of Aboriginal and Torres Strait Islander students were enrolled in further study six months after completing VET training.

“population parity” (p. 14), and suggested reasons for the higher VET engagement levels including “method of study, its curricular content, or the career options”, and the need to earn money. Geographical location is given as another potential reason, with only 44% of Aboriginal and Torres Strait Islander peoples living within one of the 49 cities and towns with a university campus (p. 79).

Reasons given by Aboriginal and Torres Strait Islander graduate students for undertaking VET training in 2011 were: “employment related outcomes” (81.1%); “further study outcome” (4.4%); and “personal development outcome” (14.5%). However, it appears that VET to higher education is not a strong pathway for most students as only 4.5% of non-Indigenous students indicated reasons for VET enrolment were for further study. In 2011, 79.1% of Aboriginal and Torres Strait Islander VET students completed qualifications at Certificate I, II and III levels; while 20.9% completed qualifications at Certificate IV, diploma, graduate and advanced diploma, associate degree, undergraduate degree and graduate certificate levels (National Centre for Vocational Education Research, 2013).

The pathway from VET to universities is complex, with many barriers, for students as well as for education providers, and is not well researched (Bandias et al., 2011; Behrendt et al., 2012). Reasons for selecting VET in preference to university vary, and growing collaboration between sectors is proving fruitful. Dual sector universities show some increased success in ‘mapping’ VET attainment to university degree programs and in transition to university (DIISRTE, 2012, p. 47). For students in dual sector universities, particularly in regional locations, the seamless transition within one location may be a key factor in retention figures for Aboriginal and Torres Strait Islander students.

Copies of the Final Report, Literature Review and additional Web Resources are now available from the University of Notre Dame Australia website at: www.nd.edu.au/research/olt-aboriginal-and-torres-strait-islander-transition/home.

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Distance-based VET learners engaging workplace guidance and support for their studies

In 2012–2013, I carried out a small-scale research project with 13 mature-aged distance-based learners studying the Certificate IV in Training and Assessment (CIVTAA) through CSU Training, a Registered Training Organisation (RTO). The study recognised how distance-based learners are often physically isolated from their RTO-based learning facilitator and other learners and considered the following:

- What additional supports in the workplace could be utilised to enhance learning and understanding
- Who did learners in this study seek out/ who sought them out in the workplace to assist or guide them; and
- What did these people do to assist?

The principal respondents were from a range of industries including horticulture, health, client services, law enforcement and hospitality. Each responded to a questionnaire and 6 of them also participated in individual telephone interviews. Three learning facilitators from CSU Training (secondary respondents) also responded to a separate questionnaire and telephone interview.

All respondents were asked about:

- How distance-based learning students learn best at work and when being assessed
- The value of social learning at work and remotely with a learning facilitator
- Sources of support/guidance for distance-based studies, at work and remotely.

A summary of what the respondents told me consists of three inter-connecting factors that contributed to a valuable distance-based learning experience:

1. The learning and assessment for the qualification was authentic and practical
 - It was based principally on real work tasks and projects, not on simulations or case studies
2. Learning facilitators supported respondents by displaying the following crucial characteristics:
 - Being readily available and accessible

- A good communicator
- Guiding the learning and using relevant examples
- Giving constructive, timely and prompt feedback on the student's work.

3. The involvement of specific people in the workplace came from two main sources:

- Work colleagues/peers
- Work-based 'others'.

Of particular interest in this study was the importance of work-based support for the respondents, which was variously and repeatedly described by them as: *'critical'*; *'essential'*; *highly significant'*; *'invaluable'*; and, *'motivating'*.

WHO provided this support in the workplace?

Specific work colleagues were identified as: immediate colleagues/peers; experienced colleagues with specific skills; role models; critical friends; informal mentors; colleagues from other departments; colleagues from previous workplaces; contacts met from other companies as part of their current work role; friends at work who had completed the CIVTAA; and, learning team members. All of the distance-based learners accessed support/guidance from immediate work colleagues and also elicited or were offered support from various other colleagues.

Support from work-based 'others' included: immediate managers and regional managers; supervisors; formal mentors; peers in other departments; and, assessor team members. Each respondent also had specific support or interventions from some of these work-based 'others'.

WHAT did these work-based supports do?

Immediate colleagues were easily accessible for all respondents. Additionally, various colleagues/peers also gave personal and moral support by:

- Giving perspective on and encouragement for, the requirements of the CIVTAA study programme

- Being available for informal exchanges and discussions
- Contributing ideas and giving feedback
- Acting as a 'sounding board' and sharing ideas.

Various work-based 'others' also provided complementary support and guidance by:

- Enabling time/resources/approval to complete studies
- Granting or arranging access to people in other departments
- Engaging in formal discussions about work
- Collaborating on study tasks and projects
- Mentoring and giving feedback on formal assessment tasks
- Giving of their time to assist a learner.

WHY was this work-based support so valuable?

Learning at and through work is not neat and tidy; rather, it is actually quite messy, as various requirements and responsibilities of the job compete for a worker's time. Additionally, learning remotely from the RTO for a qualification and feelings of isolation from the learning facilitator and other learners, means that the overall learning environment for distance-based learners can be quite challenging. So, the social interactions and interventions that occurred in their workplaces and which supported/guided the respondents in this study became critical contributors to their learning.

A practical suggestion arising from this study is:

- At the commencement of an individual's distance-based learning programme, the learning facilitator and the learner could work together to identify specific work-based contacts who may be willing to guide and assist the learner, by using a simple checklist which lists the work-based contacts identified in this study and which can act as prompts for the learner.

Hilary Timma
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Targeted subsidies can improve completion rates?

Contractors who take on apprentices are not all made from the same clay. They are represented by a diverse group of individuals with differing needs, characteristics and motivations. This research was conducted on behalf of the Australian Brick and Blocklaying Training Foundation (ABBTF). The ABBTF manage the brick industry employer subsidy to encourage the hiring of bricklaying apprentices. This article focuses on one particular section within the report. Does this subsidy motivate all employers in the same way?

A randomised sample (N=453) stratified by state was conducted with employers of bricklaying apprentices across Australia. A two-stage cluster analysis was employed using Ward's method. This clustering utilised employer average apprentice completion rates and an index of subsidy influence. A four group profile of bricklaying employers was produced with good separation and strong interpretability. Importantly, these four employer groups showed significant differences in their survey responses, which painted a rich and informative picture. The group names reflect the author's interpretation.

The Businessman

(Completion rate of 91%, SD=.14, n=93)

This contractor is the most likely of all to see an apprentice as a profitable proposition. Although they may not hire because of the subsidy, they are twice as likely to hire when the financial incentives come along. In their view, the subsidy does help to offset the time away at trade school. Their biggest concern is hiring the 'wrong' person since they don't want to find out they've wasted the last six months of their time training.

The Craftsman

(Completion rate of 94%, SD=.11, n=72)

This contractor has been in the trade longer and started having apprentices earlier than most other contractors. They know their trade, are proud of being a bricklayer and would be happy to show someone how good this industry is, even without the subsidy. They find it relatively easy to find an apprentice, they are willing to hire and don't have all the worries other contractors have about taking on an apprentice.

The Warden

(Completion rate of 31%, SD=.22, n=92)

This contractor goes through a lot of apprentices, but experiences a high number of drop-outs. They are least concerned about finding the right person or replacing an apprentice but are more concerned with keeping the 'chain gang' moving. Subsidies do not influence their hiring decision. In fact, they are more worried about apprentices taking up too much of their time. 'If everyone would just do their job and show up', this contractor would be much happier.

The Mercenary

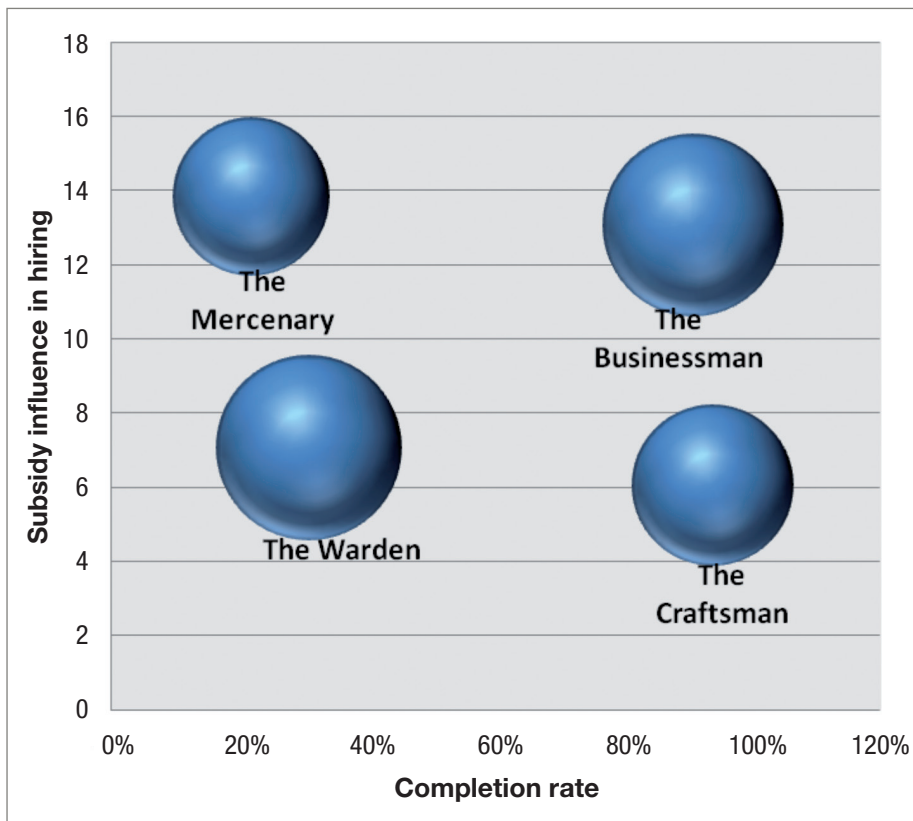
(Completion rate of 22%, SD=.22, n=71)

This contractor gets paid to train a lot of apprentices, or at least that's how they see the subsidy working. However, they question whether it is all worthwhile – most probably because of the high number of drop-outs they experience. This contractor worries about the apprentice slowing them down and whether they should keep them on or let them go.

Subsidies are perceived differently by employers of bricklaying apprentices and highlight significant variance in attrition rates. The results support a more targeted approach in attracting and financially supporting contractors who are best suited to the role.

Report can be accessed VOCEDplus: <http://hdl.voced.edu.au/10707/273801>.

Fig 1: Cluster analysis of contractors who have employed bricklaying apprentices



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Adult education as a stabilising response to conflict

When a complex intervention is undertaken in a society recovering from conflict, adult education can be transformative. I wanted to make the challenge of delivering quality adult education that acts as a stabilizing influence a bit less daunting for policymakers and practitioners alike.

The aim of the study was to examine how adult education can be part of an international response in societies recovering from conflict, which can stabilize rather than de-stabilize, thus enhancing security. The guiding hypothesis was that there has been a failure to recognize the contribution adult education can make in building a secure society, resulting in policy vacuums and under-funding of the sector. The three countries studied were Cambodia, Bosnia-Herzegovina and Iraq.

The study relied primarily on documentary research, but also on opportunistic data

collection during periods of work in each of the three countries. By identifying common themes and practices in each specific scenario, it has been possible to determine the links between adult education and security.

The findings supported the guiding hypothesis and affirmed that adult education can play a key role in stabilizing a post-conflict society. The resultant understanding of the links between adult education and societal development underpin a new framework for adult education in such societies, which balances short-term security issues with community values and the longer term requirements of society, reducing the potential for future conflict. A checklist for adult education practitioners and an analytical tool that uses radar charts were developed as part of that framework.

The radar charts help visualise and understand the impact of adult education

on five levels (the learner; the community; the state; the region; and, international bodies). The standard of adult education can also be judged according to the impact of the programme, which will sit on a spectrum:



The framework, checklist and analytical tool could potentially inform decision making within the United Nations (UN), the European Union (EU), the United Kingdom government and the British military.

Thesis submitted for the degree of PhD at the Institute of Education, University of London

Carolyn Johnstone

Where are the female trades teachers?

Recent government and industry funding has been targeted at increasing the number of women and girls in non-traditional trades. The reasons given relate to economic productivity and gender equity. Despite a range of programs, the number of females in these occupations have remained relatively static. The reality is that there continues to be a huge gender disparity in certain industries. Recent figures suggest women make up 45.7% of the overall Australian workforce across all industries, but only 22.6% in utilities, 15.1% in mining and only 11.8% in construction (WGEA, 2011)

During late 2013 and early 2014, we undertook research to ascertain whether the presence of female teachers in trade teaching sections in TAFE would be advantageous to increasing the number of women and girls in the non-traditional trades. We identified key stakeholders, including current female and male teachers, and relevant industry bodies, and by way of guided conversations based on a questionnaire, discussed their views of and experiences with this issue. One of the difficult parts of this research was to find the female trades teachers to interview. But as one respondent noted, it is hard to increase the numbers of female trades teachers when there are so few females in the trades overall.

Whilst most participants in the research strongly supported the concept of increasing the numbers of female trades teachers, some also asked whether gender was the defining issue, or rather a good teacher with the right skills and understanding of the needs of female students?

The literature had little to say that was directly relevant, but there was acknowledgement of the impact of teachers on girls making decisions about careers, and the importance of both role models and mentors. As these roles are often undertaken by a teacher, we felt this was a significant issue to recognise. Industry associations such as SALT (Support and Linking Tradeswomen) provide role models for girls in seeking to expand their career options, and work with educational providers.

As one respondent said, increasing the number of women in trades is a long-term incremental process, therefore the programs need to be sustained and sustainable. Cutting funding to programs once they start to achieve successful outcomes or the economic conditions deteriorate has often resulted again in the decrease of women in these occupations.

Evidence from many other sources, including NCVET student satisfaction surveys, acknowledge the importance of

good teaching to successful student outcomes. Many respondents commented that a female teacher can have a positive impact on male students as well as female students. Having male and female teachers working side-by-side, and respecting one another's abilities, demonstrates that there is a place for women in this industry, and will help to change mindsets that still exist around male-dominant industries. As one of the respondents to the questionnaire said, "If you have no female teachers, it sends a message of its own."

Given that all respondents to the questionnaire were supportive of increasing the number of female trades teachers, this should be included as an important strategy to support the growth and acceptance of women and girls in non-traditional trades.

Linda Simon – VET Consultant
Annette Bonnici – The Northern Sydney Institute

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“Apprenticeship Education” in Sweden

The results presented here are from a pilot project which focussed on the new Swedish model of apprenticeship in upper secondary school called “Apprenticeship Education”. The Swedish VET-education system in upper secondary schools has mainly been school-based so this was a new pathway in VET being introduced after recommendations by the OECD (OECD 2008). The project took place between 2008 and 2013 and was funded by the Swedish National Agency of Education. The studies initially focussed on pedagogical issues. The outcome of the follow-up studies showed great challenges for VET-teachers as well as the apprentice students who were participating in the “Apprenticeship Education”.

The Swedish model “Apprenticeship Education” differs from apprenticeship systems in for example Germany, Austria and Denmark. The dissimilarities can be explained historically. When industrial production increased in Sweden in the middle of the 19th century, the guild system was abolished. Unlike the countries listed above the apprenticeship system did not remain. The idea of school-based VET-education emerged from 1930 and became the most common way to educate students in VET. Although within the construction vocations apprenticeship remained alongside the formal VET school system and became eventually intertwined with it (Berglund 2009).

Apprenticeship was re-introduced in Sweden in upper secondary VET-education at the turn of the millennium as a means to reduce the high youth unemployment rates. This “Modern Apprenticeship” was directed to young people at risk of failing in school. Although there was neither a great interest from

industry nor students, the new liberal-conservative government decided to invest heavily in apprenticeship in a upper secondary school reform in 2011. In 2008 they decided to carry through a three year pilot project on upper secondary “Apprenticeship Education” (Berglund & Lindberg 2012; Berglund & Henning Loeb 2013). In the Swedish model the apprentices’ are students not employees. The regulation (SFS 2007:1349) assumed more than 50 % of all education (including general subjects) needed to be carried out at workplace, which actuality was 80% of the vocational subjects as all of general subjects were school-based.

The large proportion of workplace-based learning caused great challenges in finding work-places who wanted to participate. The “Education Contracts” with workplaces were on voluntary basis and could be interrupted if something did not work as desired. The initial idea (SFS 2007:1349) was to create “Apprenticeship Committees” at all schools comprising school and workplace representatives in order to facilitate cooperation and carry through apprenticeship education. Those committees rarely worked and their tasks became VET-teachers assignments. Another issue of great concern was the legitimacy of the apprentices. As being students and not employees in this model gave them a weak position as learners at workplaces. The findings show that the intended structure of the Swedish model Apprenticeship Education did not work and is in need of further reform.

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