

# The contribution of VET student placement to innovation in host organisations

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# About the research

## *The contribution of VET student placement to innovation in host organisations*

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Vocational education and training (VET) has an important role to play in the Australian Government's National Innovation and Science Agenda. One of the obvious mechanisms for this contribution is through the development of skills. However, the authors of this report ask whether the student-placement process – whereby VET students are placed in a host organisation to practise their newly acquired skills – can also contribute to innovation in the workplace.

Through four case studies (in early childhood education, nursing, hospitality and community services), this research considers the role of the student, the host organisation and the registered training organisation (RTO) in the likelihood of innovation arising through the student-placement process.

## Key messages

- The case studies did not provide unequivocal evidence of individual students contributing to innovation in the workplace, where innovation is defined, according to the Australian Bureau of Statistics (ABS), as the development or introduction of new or significantly improved goods, services, processes or methods. While this might be reflective of the types of industries represented in the case studies, most participants in the research (including students, employers and trainers) believed it was not possible for learners to contribute to innovation due to their lack of experience.
- However, if the definition of innovation is expanded to include 'practice innovation', whereby improvements are made by introducing new ways of doing things that are integral to everyday work in an organisation, then there is evidence that the student-placement process may play a role.
- It was recognised that the new knowledge and skills learned by students in their formal studies may be more contemporary than those of staff in the workplace. The case studies revealed examples of knowledge diffusion, and of students making small scale improvements to work practice at a local level, thus by default contributing to an increase in workplace innovation.
- There are opportunities to optimise VET student placement as a knowledge diffusion mechanism to enhance workplace innovation but there needs to be a shift in the way in which all participants view and value the contribution of the VET student.
- A suggestion emerging from this research is that host organisations and training providers could work together to capitalise on the student-placement process by identifying ways to encourage knowledge diffusion and practice improvements by students. This needs a changed mindset from 'the student is here to learn from the business' to 'the student whilst learning from the business can be encouraged to express their own knowledge and ideas'.

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Managing Director, NCVET

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**The student placement process does not seem to lead to innovation. However, students may make local improvements in the workplace.**



## Executive summary

With innovation seen as critical to Australia's economy (Commonwealth of Australia 2015), it is worthwhile to ask about the contribution of the Australian vocational education and training (VET) system to innovation. Previous research has highlighted a number of ways VET can contribute to innovation, including through knowledge diffusion (Dalitz, Toner & Turpin 2011), skills development and networks (Curtin & Stanwick 2011), and training provider–business partnerships (Callan & Ashworth 2004). One way by which VET interacts with Australian businesses and organisations is through student work placements. This process involves students based in registered training organisations (RTOs) spending periods of time in host organisations for work experience, allowing them to apply and hone their new skills and knowledge and acquire skills and dispositions that can only be developed in authentic settings. The student-placement process contrasts with apprenticeships and traineeships, whereby students are employed in the workplace while they complete their studies.

To date, there has been no research into the possible contribution of VET student placement to innovation in host organisations. The research described in this report represents an initial exploration of this question. The research adopted the Australian Bureau of Statistics (ABS; 2016) definition of innovation: the development or introduction of new or significantly improved goods, services, processes or methods. The research, which was based in south-east Queensland, used a mixed methods approach, which involved interviews with placement students and host organisation and RTO staff. The report presents an exploratory study and four case studies in the industries of early childhood education, nursing, hospitality and community services. Training in these industries often requires students being placed in host organisations for work experience to complement their provider-based learning.

The research did not find unequivocal examples of the development or introduction of new or significantly improved goods, services, processes or methods that could be attributed to the activity of VET placement students or the placement process generally. Many participants – students and host and provider staff alike – believed that it was not possible for a learner to contribute to innovation due to their comparative lack of expertise. Some also considered it inappropriate for VET students to make suggestions for improvement in host organisations. However, examples were identified in which the VET student-placement process – as an integrated, strategic focus in an organisation – contributed to organisational agility, and some students were even found to introduce improvements at the local level.

If the focus shifts to innovation systems and VET's role in Australian innovation systems as a mechanism of 'knowledge diffusion', then there is evidence that the student-placement process does make a contribution. There was evidence that the new knowledge and skills acquired by students in their formal studies were sometimes more up to date than those possessed by staff, and in such cases the student-placement process contributed to knowledge diffusion and, therefore, indirectly to innovation.

The data also suggest that if the definition of innovation is expanded to include 'practice innovation' (Eilström 2010), VET student placement can indeed contribute to innovation. The data contained numerous examples of VET placement students undertaking tasks in

ways that were new and effective from the point of view of host organisation staff. A number of staff acknowledged that their practice had been altered through their encounters with VET placement students. On the basis of this evidence we propose that the VET student-placement process contributes in a clear way to practice innovation through improvements at the local level.

On the basis of these indications, the researchers make the following suggestions for making fuller use of VET student placement as a knowledge-diffusion mechanism and a driver of practice innovation:

- Stereotypes about VET placement students should be challenged. Stereotypes, including the idea that learners do not possess the knowledge or skills to contribute to improvements and that it is inappropriate for students to make suggestions, serve to block the diffusion of knowledge and practice innovation. These stereotypes can be found among VET students, provider staff and host organisation staff.
- Providers should encourage students to make suggestions in appropriate ways if the students see potential for improvement during their placements. Providers often share the assumption that learners are best limited to observing and absorbing information and practices while on placement. Assessment task projects that involve the introduction of new ideas, processes and practices in host organisations can be a way of realising the potential of student placement as a driver of innovation.
- Host organisations should also encourage placement students to make suggestions for improvement if students see the potential, and should ensure that clear systems are in place to gather suggestions. While many host organisation staff were amenable to receiving suggestions and feedback from placement students, the students were not always aware that this possibility was available to them and were also unsure about the process for making suggestions if they saw potential for improvement.
- Host organisations should take measures to ensure that contributions to knowledge and practice at the local level can be shared widely through the organisation. The research suggests that knowledge and practice contributions do not necessarily spread from the local level.
- Host organisations and providers could work together to challenge stereotypes, encourage suggestions for improvement from placement students and identify mechanisms for disseminating knowledge and practice improvements at the local level. At present, strong relationships between providers and organisations ensure that a number of benefits arise from the student-placement process, including facilitating organisational agility, but mechanisms could also be established to realise the potential that student placement has to contribute to innovation.

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**Student placement provides an opportunity for knowledge diffusion, where updated skills and knowledge are passed onto other workers.**



## Introduction

This research investigated the contribution of the student-placement process to innovation in host firms. Student placement is seen as an important part of entry-level vocational education and training (Billett 2009; Guile & Griffiths 2001; Smith & Harris 2000). Placement is an opportunity for students to apply and develop skills acquired in formal training; it also allows employability skills to be developed in the authentic context of a functioning enterprise. But, while there is consensus that placement is beneficial for students, less is known about how the VET student-placement process impacts on the way host organisations operate and whether innovation can result.

Innovation has been linked with productivity since the 1930s (Rice 2011; Schumpeter 1934) and with workplace learning in more recent times (Ellström 2010). Innovation can be defined as *the development or introduction of new or significantly improved goods, services, processes or methods* (ABS 2016). Such definitions account for the new or novel and the added value this creates. Earlier models of innovation focused on the work of solitary innovators or the research and development practices of organisations (Lazonick 2005). In contrast, newer 'open' models of innovation stress the 'interactive character of the innovation process, suggesting that innovators rely heavily on their interaction with lead users, suppliers, and with a range of institutions inside the innovation system' (Laursen & Salter 2005, p.131).

The importance of innovation to Australia's economy has been emphasised in recent policy, with for example the National Innovation and Science Agenda asserting:

Innovation and science are critical for Australia to deliver new sources of growth, maintain high-wage jobs and seize the next wave of economic prosperity ...

Innovation is important to every sector of the economy – from ICT to healthcare, education to agriculture, and defence to transport. (Commonwealth of Australia 2015, p.1)

Despite the fact that vocational education and training is not mentioned in this document, it is recognised that 'skills' are critical to the agenda. Research has indicated the ways by which VET contributes to innovation, for example, through the process of 'knowledge diffusion' in innovation systems (Dalitz, Toner & Turpin 2011), and examples have been presented of innovation linked with strong partnerships between VET providers and businesses (Callan & Ashworth 2004). The existing research indicates that VET has a role to play in promoting innovation: it is seen as a knowledge- and technology-diffusion mechanism, working primarily through supplying skilled workers to firms. Innovation in firms is facilitated by appropriately skilled workers. However, none of the research has specifically examined the role of the student-placement process in innovation. This process may work in a different way from that of the development of skills in individuals. In student placement, VET providers and firms are brought into a relationship. While this relationship is partly about the supply of skills (in the form of recently trained student workers), it may also promote openness and interaction, which can contribute to innovation (Laursen & Salter 2005).

The research reported below presents an initial exploration of the question of the contribution of VET student placement to innovation in host organisations. The research explored the whole process of student placement, including the roles of the host organisation, placement students and training providers.



Since there was little existing research to build on, an exploratory approach was adopted for the project incorporating two key phases:

- Interviews with training provider staff, VET placement students and host organisation staff accessed through their involvement in specific VET program areas (presented in the 'Exploring the question' section below)
- A set of case studies based on host organisations, where a survey was used to identify organisations for the case studies (presented in the 'Case studies' section below).

The research was thus a mixed methods design with some scope for redesign and adaptation. The rationale of the research design was that the first component – the interviews – would produce some 'orientation' to the problem. Analysis and reflection on the resultant data provided the researchers with guidance for the construction of a survey to help to identify possible case study sites. Four case studies of such host organisations are reported here. These studies and data from the exploratory phase of the research indicate that VET student placement does not contribute in a direct way to the development or introduction of new or significantly improved goods, services, processes or methods. However, there was evidence that VET placement students play a role in knowledge diffusion. Furthermore, if the definition of innovation is expanded to include improvements to organisational practice, VET student placement can contribute to innovation.

A literature review follows, which confirms the dearth of research and theory on the contribution of VET student placement to innovation. However, the review pieces together research and theory from a range of projects and authors to yield conceptual and theoretical resources for the project. Following the literature review, the findings are presented in two chapters, the first giving results from the initial exploratory phase and the second, the four case studies. A discussion chapter reflects on the data, draws out the learning from the project and offers some suggestions for realising the potential of the student-placement process to contribute to innovation.



## Literature review

The concept and practice of innovation has become more complex and significant as both a business-economic imperative and a learning-staff development focus. It encompasses everything from the creation of new and novel products and technologies to the often hidden and mundane processes and efficiencies that underpin organisational change. Potentially both awesome and unnoticeable, innovation can emerge from the accidental, and purposefully result from the planned. Its identification and evaluation are highly problematic. Within this diverse set of meanings and possibilities, this review addresses issues of vocational education and training and its relationship to innovation, with a particular focus on vocational students' placement in work practice and the contributions this can make to innovation in the organisations that host this work—learning experience. The review considers the nature of VET student-placement practice and the nature of innovation.

### Student work placement

Directly placing students in a workplace as part of their training program has become increasingly common in all Australian education sectors (Smith & Harris 2000; Atkinson 2016). The practice goes by many names: in secondary schools it is referred to as work experience and structured work-based learning, while in universities it is referred to as work-integrated learning and can take a number of forms, which include practical professional experience, internship, service learning and clinical practice. In the VET sector, the practice has multiple labels, depending on the nature of the program and the organisational arrangements. For example, students can be employed and engaged in programs directly related to their employment, such as apprenticeships and traineeships; students can also be engaged in prevocational programs, undertaking entry-level courses, where the completion of specified hours and task requirements in a workplace are compulsory components of their program, components that can often be undertaken as either volunteers or as paid employees. In some instances the host organisation can be the training provider and in others it may be an independent enterprise or employer, which may or may not have formal relationships with the training provider. These various forms of placement can be referred to as vocational placements, student placements, work placements and industry experience. The kinds and qualities of organisational relationships between training providers and the industry/host organisations are foundational to the success of placement processes and outcomes. Student work placements cannot be undertaken without cooperation between training providers and their industry/organisational partners.

In the Australian context, the research and literature that has explored these relationships and VET student-placement practices tends to be focused on one or other of two dominant issues. Broadly, those issues are: first, the promotion and securing of more and better partner relationships and working arrangements between education providers and industry host organisations; and, second, the development of learning processes and outcomes to improve training providers' program design and delivery. Each of these issues is discussed below.

## Pursuing VET/Industry partnerships

The need for strong industry/organisation partnerships with education may be said to have been the focus of national policy and training quality debate for decades. The national VET system could now be described as 'industry driven' and all RTOs are legislatively bound to secure and collaborate with industry partners (Commonwealth of Australia 2014). How to do this effectively and why it is both necessary and advisable is a key theme dominating the VET sector literature specifically related to this issue (for example, Callan & Ashworth 2004; Gelade & Fox 2008; Stanwick 2009; Commonwealth of Australia 2014; Flynn, Pillay & Watters 2016). The benefit to industry (for example, lower training costs, higher skill levels, enhanced productivity etc.) that can accrue from stronger partnerships with training providers is often a substantial element of this theme (for example, Skills Australia 2011; Stone 2012; Econtech 2013; Victorian Employers Chamber of Commerce and Industry 2015). And within this element, the promise of higher levels of innovation, increased viability through greater efficiencies, and competitive advantage in the globalised economy are the arguments promoted (Toner et al. 2004; OECD 2009). In their examination of mining, solar energy and computer gaming organisations, Dalitz, Toner and Turpin (2011) account for such possibilities but caution that they are only realisable if and when the partnerships are strong and future-oriented – focusing on addressing immediate skills needs is insufficient for securing the long-term benefits that innovation and improved operational practices can enable in organisations that partner with education providers to deliver training.

By way of illustration of these kinds of future-oriented initiatives: from the VET in Schools sector, Flynn, Pillay and Watters (2016) report on the success of the partnership between the Queensland Minerals and Energy Academy and the Queensland Department of Education's Gateway to Industry Schools Program. This partnership brings together 34 secondary schools and 12 multinational energy companies and has successfully secured the student employability and industry skills development objectives that underpin the project. Additionally, from the TAFE sector, the Office of the Chief Economist in the *Australian Innovation System report 2014* (Office of the Chief Economist 2014) outlines a number of industry partnerships initiated by TAFE Queensland SkillsTech. These include the establishment of the High Density Polyethylene (HDPE) Centre of Excellence, whereby gas mining industry companies and TAFE Queensland collaborate to secure the kinds of high-tech skills needed for the development of this industry. These kinds of partnerships are illustrative of the learning and skills development cultures that can sustain innovation.

## Improving training provision

In relation to the second issue, improving learning processes and outcomes is predominantly focused on improving RTO relevance to industry needs, along with associated learning design and delivery practices. Strong RTO relationships with industry/host organisations enable a wide range of benefits. For example, RTOs are better able to: target the skills development of their students in authentic sites of practice, as well those of their industry partners; introduce students to the broader cultural and procedural realities in which work is accomplished; establish deeper and additional connections and understandings with host organisations, their staff and learning needs; and enhance the teaching and learning skills of their own training staff

(Smith & Harris 2000; Kilpatrick & Guenther 2003; Callan & Ashworth 2004; Figgis 2009). More than supporting students' learning through authentic work-based practice and RTO staff currency of industry experience through direct participation in host organisation practices, strong RTO–industry partnerships are seen as driving innovation in both VET teaching practice and host organisation business and production practice (Curtin & Stanwick 2011).

In exploring alignments between innovation and VET, Callan and Ashworth (2004) advanced six key practices as indicators of highly innovative organisations. The fifth of these was 'use partnerships'.

Partnerships in vocational education and training are being used in numerous ways to promote more innovative programs, consulting opportunities, staff development and change in the workplaces of the providers and industry organisations ... Over time, knowledge and skills related to successful partnering had become a source of competitive advantage for the enterprises involved ... Partnerships, customisation and innovation go hand in hand. (Callan & Ashworth 2004, p.22)

Elaborating on these claims, Callan and Ashworth (2004) offer examples of training provider–organisation partnerships that illustrate how new training practices that have developed through partnerships have contributed to improvements in host organisations and can be considered innovative. They included using host organisation staff as student coaches, mapping competency development and assessment around host organisation projects, and expanding the range of fully on-the-job programs delivered in host organisations.

These kinds of improved training practices can be considered examples of what Dawe (2004) referred to as the 'continuous improvement' through which the VET system contributes to industry innovation in Australia. Curtin and Stanwick (2011) outlined three primary aspects of this contribution: first, the provision of skills training to industry (by which workers contribute to the innovation practices of their organisations); second, the development of underpinning competencies on which skills are based (including learning to learn and adapt); and third, that VET is part of an innovation system and thus goes beyond immediate industry partners to encompass a range of other agencies (including other education institutions, professional organisations, government and regulatory bodies, peak industry bodies etc.). Through these three sets of contributions, the VET system generates continuous improvement in its teaching and learning, staff development and industry collaboration practices.

The need for VET sector improvement across the range of its practices (e.g., teaching and learning provision, industry partnerships, etc.) and its contribution to innovation generally has been both documented and legislated (for example, Rittie & Awodeyi 2009; National Quality Council & Council of Australian Governments 2009; Commonwealth of Australia 2014). Despite the range of successes that can be noted, examples of insufficient alignment between reformed RTO practices and industry skills needs can equally be noted. For example, in their nation-wide examination of training provider–industry partnerships, Kilpatrick and Guenther (2003, p.41) reported:

While there is no doubt that involvement in VET is increasing and partnerships are producing positive outcomes, questions remain about whether the systems that are in place ensure quality learning outcomes.

Some of that dissatisfaction is exemplified by the low numbers of employers using the VET system. In the 2015 Survey of Employers' Views on the Australian VET System (NCVER 2015), only 52.8% of employers used the system. Further, while employer satisfaction overall was relatively high (approximately 75–85%, depending on the measure used), of those employers requiring workers to hold vocational qualifications, 10.9% (up from 8.7% in 2013) were dissatisfied with the VET system. Their primary reasons for dissatisfaction were that the training delivered was of poor quality or low standard, there was insufficient focus on practical skills, and that relevant skills were not being taught. Additionally, among the range of impacts on organisations as a consequence of having inadequately trained staff (for example, increased operating costs, loss of business, increased workload for existing staff etc.), 30.8% of employers reported delays in developing new products or services. Taken together, this range of statistical data suggests that there is great scope to improve provider–industry partnerships and that within this scope a necessary focus is improving provider learning processes and outcomes – a key issue at the core of the national VET system quality debate (Harris 2015; Wheelahan & Moodie 2011).

## Student placement research

In this context of increased emphasis on the training provider–industry partnerships and the requirement for higher-quality learning, there is very little research that directly addresses student work-placement practice. As Smith and Harris (2000) and more recently Atkinson (2016) indicate, the Australian research and literature on student work placement is primarily concerned with the experiences of universities and 'work-integrated learning'. In relation to the VET sector, considerations of student placement are mostly indirect and usually couched within other agendas that focus on issues of policy, assessment and student equity and transition. For example, in their review of changes to VET provider practice and delivery in Victoria (for the period 2008–13), Guthrie et al. (2014) outlined a range of actions taken by RTOs in relation to both their business and training delivery practices, including large-scale alterations to their work-based learning practices. Guthrie et al. (2014, p.48) report:

One public RTO mentioned more workplace delivery but another referred to the need to curtail workplace delivery and bring students in blocks on to the campus (which was reportedly difficult for employers to manage).

Rather than being seen as an essential aspect of quality training provision, work placement and training delivery are often viewed as management variables that can be increased and withdrawn, as RTO business models and funding arrangements vary according to regulatory policy changes.

RTO capacities to enact and ensure quality assessment practices are also directly aligned with their being conducted in work. Misko et al. (2014) examined VET assessment practices and qualification credibility and confirm (pp.15–19):

Practical skills were tested via demonstration in realistic and authentic settings, including in workplaces and practical skills laboratories or workshops ... Poor assessments were characterised by the lack of authentic, appropriate and safe testing environments.

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**There is consensus that work placement is beneficial to students, but less is known about the impacts on the host organisations.**

Further, broader training objectives, which include supporting equity groups to secure greater levels of social inclusion, literacy and numeracy, employability and community cohesion, are reported as more attainable through immersing learners in the actualities of work (Nechvoglod & Beddie 2010; Hargreaves 2010).

More direct analysis and evaluation of student work placement (that is, that does not focus primarily on more and better partnerships) is found in research that examines particular vocational programs. For example, Armatas and Papadopoulos (2013) outlined the beneficial experiential learning outcomes that arose for students, trainers and industry partners from incorporating work-placement components into an information communications technology (ICT) course which had not previously contained such opportunities. Similarly, Zulch et al. (2016) reported how the inclusion of a workplace learning component in an allied health assistant program supported not only students' learning and confidence but also contributed to enhancing the quality of life for the aged care residents with whom the students worked. These kinds of positive learning experiences and outcomes confirm the long-held understanding that direct involvement in workplace practice enhances vocational learning (Billett 2009; Guile & Griffiths 2001). Indeed, John Dewey wrote in 1916, 'the only adequate training for occupations is training through occupations' (Dewey 1966, p.310).

The benefits of student placement extend across a range of aims and achievements for students, RTOs and host organisations. Fundamentally, placement is an opportunity for students to apply and develop skills acquired in formal training, also developing employability skills in the authentic context of a functioning enterprise. But while there is consensus that placement is beneficial for students, less is known about how VET student placement impacts on how host organisations operate and whether improvements such as process and productivity gain, staff development, client satisfaction and, potentially, innovation can result. The cases noted above suggest such improvements do emerge but specifically how and through what work and partnership practices requires greater investigation, particularly when new and better work and training practices and outcomes are anticipated and desired.

## Innovation

Using the 2016 ABS definition, innovation is: the development or introduction of new or significantly improved goods, services, processes or methods. Typically, this definition is viewed in terms of increased business activity and is understood as an economic concept, whereby securing innovation and becoming more innovative are fundamental to organisational viability and national prosperity in competitive market economies. Such understandings underpin the Australian Government's National Innovation and Science Agenda (Commonwealth of Australia 2015). Its dominant themes are science and technology and their manifestation as the digital age, entrepreneurial development and market competitiveness, learning and skills development, and government leadership. These kinds of understandings and themes are seen as driving initiatives in the education system, in taxation and venture capital, and research and development. Innovation in this sense is aspirational and promoted as guiding and directing national efforts.

Despite a focus on talent and skills, the National Innovation and Science Agenda (Commonwealth of Australia 2015) does not mention vocational education and training. Schools and universities are noted as essential sites of learning and contributors of

research. A range of studies and papers have addressed the contribution of VET to innovation systems, but the role of VET in the skills development in, and from which, innovation will be enacted as work and business practice is overlooked. This contribution has been variously conceptualised. Dawe (2004) described it as continuous improvement and Curtin and Stanwick (2011), as noted above, outlined three perspectives on how this improvement is manifested as training practice and organisational benefit. Pickersgill and Edwards (2005) reported that VET impacted on innovation in regional firms through developing skilled workers. The authors distinguish the value of 'generic skills' (particularly in manufacturing and maintenance) and of informal on-the-job training to innovation. They suggest that the contribution of VET is just one element in promoting the complex phenomenon of innovation. Dalitz, Toner and Turpin (2011) viewed the VET contribution in terms of knowledge diffusion, with VET serving as a vehicle for bringing high levels of skill and knowledge to organisations. They concluded that formal education and training contributes through teaching and by developing people 'with the capability to be innovative and with the capacity to learn' (2011, p.154). They suggest that strong technical skills support innovation and that generic innovation skills could not be identified. But they stress that it is firms that innovate, not individuals. In this light, VET is best deployed by supplying high skills to firms that innovate on the basis of mastery of technical processes. Yet further, Toner (2007) reported that VET plays a role in technology diffusion (a form of knowledge diffusion believed to be central to innovation) through teaching the workforce. He suggested that VET teachers may also be involved in applied research and development in firms and that VET institutes may host exhibitions by suppliers. These are additional forms of knowledge diffusion.

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**VET is a knowledge resource, one of many elements that potentially promote the complex phenomenon of innovation.**

In the business and organisational development context, knowledge diffusion is the complex system of generating and sharing the broad range of resources that enable and sustain the production of goods and services (Morone & Taylor 2010; Laursen & Salter 2005). Innovation is dependent on knowledge diffusion because the range of resources necessary to production cannot be sourced internally. Hence, sharing, and the many forms of interaction on which it based, becomes an opportunity for innovation. Morone and Taylor (2010, p.4) state:

The simultaneous on-going processes of knowledge deepening and knowledge widening – which leads to a general expansion of the range of technologies, as well to a growing specialisation of competencies – calls for new, interactive patterns of learning.

A question that arises here is: can student work placement be an effective form of these new interactive patterns of learning?

The concept of knowledge diffusion positions VET as external to organisations and yet as an integral component of the innovation system in which organisations operate. VET is a knowledge resource, one of many that constitute the innovation system. By contrast, Ellström's (2010) concept of practice-based innovation offers an opportunity to view VET and the skills it contributes as more fully internal to organisational practice, particularly when VET emerges or is manifested as vocational student learning on site and through practice. For Ellström (2010) innovation is a cyclical process of learning. Innovation as the new, the variation, the improvisation, emerges from the tensions between work practices, as officially prescribed (the explicit dimension illustrated by job descriptions and procedural manuals), and work practices, as performatively enacted (the implicit



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**Research indicates that the VET system has a role to play in promoting and securing innovation.**

dimension exemplified by the personal and social practice and experience of workers). Ellström believes two sets of learning logics characterise this tension. They are the 'logic of production', where learning is aligned with the standardisation of practice and could be described as mostly adaptive and/or reproductive, and the 'logic of development', where learning is aligned with improvisation and transformation. Skill development, like innovation, emerges from within this practice-based learning. From this perspective and when the focus is on student work placement, important questions arise. They are: in what ways do VET placement students mediate and experience this emergent learning as innovation, and in what ways do host organisations interpret and implement this emergent learning as innovation?

Other perspectives on innovation can assist in examining and understanding the contributions that workers make and that placement students might make to host organisations, as well as the kinds of improvements and altered practices that could be categorised as innovation. For example, Hoyrup (2012), from an internal and person-dependent focus, distinguishes between 'top down' management-driven and 'bottom up' employee-driven innovation. Organisational efforts to encourage workers' 'bottom up' contributions can be based in enabling work practices that promote worker autonomy, information-sharing and greater responsibility. These kinds of practices resonate with work-learning research that suggests higher levels of personal agency can support learning (Billett 2007). Further, both product and process innovation (that is, the creation of new products and services and the achievement of increased production efficiencies), even when considered fully attributable to organisational practice and endeavour, are acknowledged as enhancing staff development and promoting further organisational initiative. It is thought that it is the interplay of these factors that drives innovation and brings the promotion of innovation as a potentially worker driven process to focus on learning in and through practice (McGrath 2001). Such perspectives support the cyclical nature of learning and innovation that Ellström (2010) outlines. Innovation generates learning and learning generates innovation. Hence, questions about where in the cycle it might be best to intervene for the purposes of securing stronger learning processes and outcomes become significant considerations for learners, organisations and the training providers that bring them together.

The existing research indicates that the VET system has a role to play in promoting and securing innovation. It can be seen as a knowledge- and technology-diffusion system, working primarily through supplying skilled workers, given that innovation in firms is facilitated by appropriately skilled workers. Further, it can be seen as a learning-leading system, facilitating and supporting the kind of training and organisational developmental practices that bring resources together in new ways.

## VET students and innovation

None of the research has specifically examined the role of VET student placement on innovation in the Australian innovation system. However, research in other settings suggests the practice may be linked with innovation. Piterou and Birch (2014) report that higher education student internships serve to promote innovation. They acknowledge the fact that research on internships often focuses on the educational benefits to students rather than the benefits to host organisations. Their UK-based review found that internships 'contribute to the development of absorptive capacity of small firms through

the use of students' skills' (2014, p.76). In a case study of innovation in Portugal, Gibson and Naquin (2011, p.1305) suggest activities that include internships 'provide key mechanisms for successful technology commercialization'. These reports indicate that higher education internships may serve as a vehicle for knowledge and technology diffusion. Given that VET has been linked with knowledge and technology diffusion in the Australian innovation system, it may be that VET student placements (the VET equivalent of higher education internships) could play a specific role in the process.

The VET student-placement process brings training providers and host organisations together in learning-focused relationships with the potential for a range of benefits that may include innovation. The extent to which these relationships can become effective innovation-generating partnerships remains to be examined. Part of this examination needs to focus more specifically on student-placement practice. Student-placement practice is more than a training provider–host organisation partnership; it is a process and an accomplishment that also offers an opportunity to understand the student contribution to these partnerships. That understanding includes identifying and evaluating how that contribution constitutes a three-party negotiation that might support innovation and how innovation is best conceptualised and pursued under these circumstances.

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**To date, the role of the VET student placement practice in innovation has not been examined.**

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**Some employers expressed the view that placement students are not capable of contributing to innovation.**

## Exploring the question

Training providers, both public and private, were approached to assist with recruitment and to elicit their participation in the research. These providers were selected using a 'convenience sampling' approach, with the research team approaching providers readily accessible through direct acquaintance and internet searches. From the provider perspective the most obvious way to look at VET student placement is in terms of specific programs, and it was decided the most effective structure for the first phase interviews would be to use particular qualifications as the basis. The programs selected for the exploratory interviews were:

- Diploma in Community Services
- Certificate III in Hospitality
- Certificate III in Carpentry
- Certificate III in Metal Fabrication
- Certificate II in Electrical (Career Start).

With substantial help from providers, host organisations were approached and recruited. Interviews were held with staff from the following organisations:

- a high school
- a disability services provider
- an events management organisation
- a home building and renovation company
- an engineering company
- a metal fabrication company
- two electrical services companies
- a hotel.

In total, 41 people were interviewed for this phase: 13 host organisation staff, 11 provider staff and 17 students. The support document contains the questions used in these interviews.

### Employers

In summarising employer perspectives on the potential for the student-placement process to contribute to innovation in host businesses, some of the employer staff expressed a fixed view: that placement students are simply not capable of making contributions to innovation. Two assumptions appear to be connected to this view: that because placement students are learners they do not have sufficient knowledge to contribute; and second that innovation (however it is understood) is a top-down process and therefore unlikely to be triggered at the 'lower' level of students on placement. Asked whether the student-placement process helps his business be more innovative, one employer responded:

I don't think so. Not innovative. I mean, the innovation comes from the leaders of the company. It gives you a bit of flexibility in sourcing them ... but still, you've got to teach them everything. (Electrical services)

Another employer said:

I wouldn't say it's [resulted in] any innovation on our workplace ... [name of placement student] was probably the biggest impact that I've seen out of a student, just the passion that I've seen from him is probably the biggest I've seen. Has it made any new inspiring changes within my program? Probably not. (Disability services)

A third employer put his response in perspective, explaining:

I'm a bit of a control freak. All my men know this, because I like things done my way ... I do control all of the things around my sites and I do get my men to do things the way I want them to do it ... it's just my own — I suppose my own personality, that I like things done my way and I teach men to do it the way I like to do it. If you want to do it your own way, that's alright, then do it somewhere else. (Building and renovation)

Staff in larger organisations appeared to hold less definite, perhaps more nuanced, views about what the student placement might offer. Some of the staff reflected on the attitude of their company: 'we're always looking for new people, new skills, new ideas. That's always really good for us; we enjoy that'. Speaking specifically about their placement students, this participant said:

I just think the TAFE students have been a real benefit to us. We've had a lot of strength; we've also had some international students through them as well. It really does help with coming to us, learning the skills and for us to learn things from them as well and continue using them. (Events management)

An operations manager at the same organisation recalled one example of a student assuming a leadership role:

The one lady I was talking about before, the older lady, she — you just knew when she was here. She had a more mature presence and — I don't know how to describe it — she was just such an asset. She'd walk in, she'd always ask questions if she wasn't sure, and she just had — I think maybe it was because of her maturity, but she had an ability just to keep people calm and keep the other staff calm. 'It's got to happen.' 'We've just got to walk a little faster.' All those sort of things. She was never really pushed to take that more sort of leadership role, but she did it very naturally. But she was always very concerned that she was still doing her job, her level job, as she put it. She was excellent and I honestly think a few more mature age coming through would make a big difference. They just kind of plateau things out ... I don't know whether it's a confidence or they're just a much calmer and — yeah, she was brilliant. (Events management)

This example and others draw attention to the potential of the mature-age placement student to contribute to improvements in a host business. The section below on student perspectives extends this point.

None of the employers made a direct connection between the student-placement process and innovation, but their views were diverse. A number of them (perhaps more likely to represent smaller companies and companies in the trades and manufacturing

fields) expressed clear views and these tended to be that the students cannot contribute to innovation, although other employers allowed that maybe the students could make a contribution. It is safe to say that the staff we spoke to were not accustomed to thinking about and looking for examples of placement students contributing to improvements in their organisations and businesses.

## Providers

Some polarity of perspectives was evident among the provider staff interviewed for the project. On the one hand, there were relatively fixed views on the potential for placement students to contribute to innovation. Like some of the employers, there were provider staff who believed this potential was minimal or non-existent. For example, when asked about improvements suggested to host organisations by placement students, a metal fabrication trainer said that he could not think of any direct evidence, and to the question of whether the students would ever challenge the way things are done said: 'I wouldn't say I know about that. No'. When questioned about whether skills flow from the provider staff to host organisations in the context of the student-placement process, this staff member explained:

It's not really our responsibility to change industry. Most people out there have been through TAFE. I've been with TAFE on and off for 20 years and the same thing is happening. So those people we trained 20 years ago are now bosses. They've been through this formal process and if they choose to go off on another tangent ... you can't tell them any differently. But hopefully the students we send back will just continue with the methods that we've taught them.

However, there were provider staff who entertained a more nuanced position on the question. Asked whether he was aware of instances where placement students passed on techniques to host organisation staff, a building construction trainer said that:

I'd have to say yes. I'm just trying to think of a couple of particular [instances] ... as I said, it's not one that I've actively sought out and nor will some blokes willingly put their hand up either to say, 'Oh yeah, I heard about that' or, 'I was talking to your guy and he was telling me about this'. They are happy to learn but I don't think they're going to willingly disclose that too much.

When probed about whether this unwillingness might be related to 'pride' on the part of employers, the provider staff member responded:

Absolutely. Absolutely. For sure. For sure. They're happy to take it on but extracting the fact that they have taken it on or learnt something like that, no, it doesn't come up. Well not in my experience anyway.

Summarising provider staff perspectives, we observe that some have relatively firm views about the role of placement students and the placement student process: that it is concerned with gaining skills rather than conveying them into the host organisation. On the other hand, there were less fixed, more nuanced, perspectives. This spectrum of responses parallels that of the employers, while a further parallel is that provider staff do not appear to be attuned to the possibility that the student-placement process could contribute to innovation.

## Students

Diverse perspectives were also evident among the students. Some felt that the scope for placement students to contribute to innovation was very limited. For example, to a question about whether he ever saw ways to improve the way things are done at the host organisation, a student in the metal fabrication program responded: 'Well actually no. They do it really good in the way that they do it. I think not really'. This student went on to explain that the standards of work at the host were higher than he had experienced in the workshops of the training provider.

Others expressed the view that it was not appropriate for placement students to seek to contribute to innovation. It was suggested by some that it would be disrespectful and ultimately likely to undermine their employment prospects to be perceived as a newcomer inclined to find fault with the way things were done in the workplace. In response to a question about whether anyone in the workplace learned anything from him, one student explained that:

Actually, I can't talk about it because all the people who are working there, they are more experienced in that work than I am, because I was like a new worker there, new [employee], so I can't say. All the people, they were telling me, 'Oh Ivan, you're doing a good weld', or something like that. 'Your welding's so good.' I can't say certainly that someone learned something from me.

However, a number of the students revealed that they had seen ways to make improvements to ways of working. One did not feel his suggestions were welcome, but in response to the question about perceiving ways to make improvements said:

I think so. For example, yesterday when I'd been working with them, I can't go there and say to them, 'Okay, this is not the right way', or, 'I don't think this way is the right way', because you know, I'm there just to learn from them. But a few things are quite obvious ... Yes. I think if you organised the job so in there in the place you know, just checking what is the best way to — and faster way to do that, it's okay. But I think that sometimes they are — [they've got a clear understanding of] the job in their minds. But they don't explain too much — how to explain to me what we will do. So they are doing, they are discussing about the job, but I think always there is more than one way to do the job. It's like I said to you at the beginning, I can't give them advice because it will be quite rude.

This response was from a mature-age student with substantial work experience in other industries. Another mature-age student who also had prior experience in other occupations described an instance where he contributed to process improvement:

I think there was some way — there was a particular model of downlights that we were wiring in. One tradie had been doing it the same way for the last year or so. Then I found a way to take a cover off the light to access the terminals easier. Okay, so maybe that's an example of just improving that efficiency of wiring up those lights. So — yeah.

Another student at an electrical services host who had learned a technique in another setting was able to pass this on to a new host organisation:

It's like — we fit off I think, something like a thousand data points in a job the other week and ... towards the end of it, I asked one of the guys how he was doing

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**Some placement students believed it was not appropriate for them to suggest different ways of doing things in the workplace.**

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**The majority of students interviewed could see how to make improvements in the workplace, but not all felt comfortable making the suggestion.**

it and he showed me, and I said, 'It looks like it takes heaps longer than the way I was shown.' He's like, 'Well how do you do it?' and I showed him and he just about cried ... he's like, 'Why didn't you show me that 500 [years] ago?' I said, 'I don't know.'

A hospitality student who was asked whether she had seen ways in which work could be improved and/or made suggestions about improvements said:

It depends what's happening. But I've seen some – when I've worked here, some things there's just not – they haven't organised it properly. So I go to the supervisor and say, 'What if you do this, it might run smoothly.' Sometimes they can just be like, 'We'll go for this now', or they think about it and they're like, 'Oh, that is correct, it does run smoothly.' They like our input.

The majority of the students interviewed were certain they could see how to make improvements, but clearly not all believed it was appropriate for them to make suggestions to employers or employer staff. This finding suggests a mismatch between what placement students may be able to contribute to host organisations and what host organisations believe students are capable of contributing. In between these positions were those employer and provider staff who were open to the idea that the placement students might be able to contribute to innovation.





# Case studies

A survey was developed to assist in the identification of host organisations whose perceptions of VET placement students and their contribution to the organisation were positive. The 46-item survey (see the Support document for a copy of the survey) sought information about the nature of the organisation, the kinds of innovation recognised and pursued, and the understanding of the concept of innovation. Combining the data from these items and those from the items used to select and recruit organisations was expected to provide a useful overview of organisational types and their views on innovation and student placement.

The training providers involved in the first phase agreed to distribute the survey to host organisations on their databases, and additional providers (public and private) were invited to distribute the survey. Approximately 180 host organisations were invited to complete the survey. Thirty-six organisations completed the survey and, of these, 17 agreed to be contacted for follow-up interviews. Among these 17, the research team sought representation from different industries, and host organisations that were larger. Organisations from the early childhood education, nursing, hospitality and community services were recruited to serve as case study sites.

Although provider staff interview data was collected, they are not reported in this chapter. Provider staff working directly with placement students and host staff tended to occupy support and administration roles and were largely unable respond in a detailed way to questions about placement student interactions and contributions on a day-to-day basis. Given space constraints it was decided to exclude reference to these data and focus instead on host staff and placement student data in the following cases.

## Global Hospitality Services

Global Hospitality Services (GHS) is a large city-based multiple-venue facility for large corporate, cultural and private events. Within its scope of operations, the organisation runs a convention centre that can cater for thousands of people. The convention centre is the focus of this case study and specifically the Food and Beverage and Commercial Catering departments, which are responsible for managing and catering for the many functions and events it hosts on a weekly basis. Within these departments the convention centre employs a small number of permanent staff, who recruit and manage a very large on-call casual staff cohort to operate its business. The convention centre has a relationship with a large public training provider that supports the provision of work experience for students undertaking hospitality courses. Interviews were conducted with the convention centre operations manager, the executive chef and the food and beverage manager, chefs (three) and food and beverage management team members (three), casual staff who were previous vocational students (four) and hospitality vocational placement students (10). Overall, 23 individuals were interviewed during several visits to the convention centre.

## VET student placement

Over the approximately 12 months of its RTO partnership, dozens of vocational students studying predominantly Certificate III in Hospitality, Diploma of Hospitality Management

and Certificate III in Commercial Cookery programs undertook work placement at the convention centre. The number and regularity of these placements varied. The Certificate III in Hospitality and Diploma of Hospitality Management students, the largest of the student groups, were required to complete 32 shifts and 36 shifts respectively. They usually worked in staff teams and were directly supervised by their team leaders, who in turn were supervised by convention centre staff. Depending on the nature and size of the functions and events worked, these teams could comprise of hundreds of staff, the great majority of whom were casuals employed specifically for a function. Up to 70 fully qualified chefs can be added to this number. Students could be offered casual work additional to their training course requirements. For many, this was welcome, as their primary objective for undertaking the qualification was to secure employment in the hospitality industry. The convention centre was a major employer in this regard.

### Leadership views on VET students' placement and innovation

The convention centre leadership staff viewed the student-placement practice as vital to enabling students' access to the practical on-the-job realities of their work. All, including the operations manager, encouraged the practice and were optimistic about its expansion in the years ahead. The practice was relatively new to the convention centre and had been facilitated by the appointment to the organisation of a training manager who had previously been a trainer at the large public RTO where their placement students were studying.

The necessity for such direct work experience for students was expressed by the executive chef:

The way that you learn how to become a chef, and it's not just learning the skills from a technical theoretical perspective, it's doing it day in and day out ... There's a tremendous amount that they can learn, particularly with large events, there's not very many places like this around Australia. There's relatively limited opportunities to see this type of catering.

The unique scale of the convention centre, and the opportunity this represented for students, was also highlighted by all of the senior staff. A range of benefits for the convention centre was also commonly identified and included the development of a growing pool of potential employees who were trained in the service practices and requirements of the convention centre; access to an immediate pool of potential casual labour; the opportunity to free up more senior staff, which enabled them to focus on 'the finer points of the delivery so we can just polish things up a little bit more ... just having those extra bodies here gives me a little bit more freedom' (Executive chef); and staff development through the requirement to improve the management of people in general and to develop a stronger awareness of the needs of the business. The executive chef was very clear when he acknowledged the interdependent set of benefits emerging from the student-placement practice. He stated:

One of the things that I need to look at though is, if it ever stopped, what would be the implications to the business here, because, like I said, we've improved a product we've sent to a guest, partially because we've had students here ... [The benefits are] the obvious win for the students but there's also a win for us as well by having them. So it's from both sides — and I would say that the benefits overall for both parties far exceed any of the negatives.

A primary goal for the convention centre is development of its capacities as a training organisation. To this end, the student-placement practice and the relationship the convention centre is building with its partner training provider is a prelude to their becoming an RTO.

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**Placement students were described by some staff as potentially leading to improved practice, simply by asking the right questions.**

## Staff views on VET student placement and innovation

Convention centre staff views about the student contribution and the placement process more generally were mixed. They ranged from views such as the students are too inexperienced and could not be expected to contribute, through to views such as students bring added value and when able can contribute fresh ideas and approaches, which are often implemented, although across this continuum of perspectives, the example of individual high-performing and talented students, either emerging through the duration of the placement or arriving and demonstrating their strengths from the outset, was given. When discussing these issues the sous chef stated:

They're enthusiastic and they just take a little bit of pressure off because the more manpower you have the easier it is. So that's where they definitely help, having the manpower ... the systems we have in place are the best you can have for an operation like this. So, no, no student has ever – I can't imagine would come to me and say I think there's a better way to do something. I'm open to it, but it's not something that I look for because it's not something that I expect to see ... You couldn't possibly be in training and have a better idea how to do it. Some of the equipment we use, you wouldn't even know how to use it, let alone come up with a different idea.

From the kitchen staff perspective, the sheer scale and systemisation of its operation leaves no room for students to do more than learn and perform their duties with increasing levels of speed and accuracy. Everything is planned meticulously and well in advance. It needs to be. The sous chef summarises:

No it's down to, I'd say perfection almost. That's what we would expect from every service that we do. It's a bit corny but it's true, it has to be perfect ... so this week alone we've got probably morning teas, breakfasts, afternoon teas, lunches, dinners. So on Friday and Saturday we've got 1000 and a 700, and then on Saturday we've got 1000 and a 330, which is a wedding ... it's just about giving these students an opportunity to see what such a large-scale event place can do. Something that they wouldn't possibly have ever had the opportunity to see, I think that's more what we're giving these students.

The food and beverage staff deal with greater numbers of students. While the kitchen has only been accepting placement students for approximately six months and considers having 10 at a time during peak periods a large number, the food and beverage team have been supervising placement students for just over a year and often have groups of between 20 and 30 at large functions. The food and beverage staff are always looking out for those students who perform well, are quick to learn and are enthusiastic about their work. As one supervisor stated:

Quite a few of them who have shown outstanding skills have come on to work for us as proper casual staff ... Someone who is willing to learn, someone that has the

right attitude, isn't afraid to work hard, shows initiative ... I wouldn't say they've improved the processes, but there's some of them that have just shone from day one. It's like, 'Yep, so as soon as you're finished your studies, we want you on board if you want to stay.'

Placement students are also described as potentially leading to improved practice, with one supervisor commenting:

I think sometimes them asking questions might make us stop and question why we do some things, which can sometimes then lead to us going, well yeah, that maybe isn't the only way to do something and we'll look at reviewing another alternat[ive] way. So it's just sometimes that fresh set of eyes that might make us think, 'Well why?' Then we'll try to search for the answer why or explain why we do that. But if someone did have an alternat[ive] way of doing something, we would give it a go.

The set-up of coffee stations and the subsequent movement of guests through them to avoid what were described as 'pain points' was discussed as an example of the kind of alternative practices that resulted from questioning. Having placement students freed up staff, who could then better observe how the various set-ups worked and were also afforded opportunity to trial different set-ups.

Overall, the convention centre staff could identify and appreciate the benefits that students brought to their work practices. Scale and systemisation were accepted as standard constraints through which the potential for the student contribution to improved practice could be acknowledged. However, instances of student-based improved practice were very limited and describing it as innovation was equally unlikely.

## VET placement student views on their work and innovation

The 10 students interviewed and the four casual staff who had recently completed their program and were now employed at the convention centre spoke of being accepted into a busy professional and yet friendly work environment, where they were encouraged to show initiative and be proactive in their approach to the work. Much of the work was very routine but not unpleasant. For example, the prospect of peeling bags and bags of onions and polishing thousands of glasses was made enjoyable through the team approach and the shared responsibility of ensuring the success of such large-scale functions and events. Further, the knowledge that every event was different and would require different menus, set-ups and forms of service was noted by students in interviews as an exciting aspect of the convention centre work experience. The work was described as welcomingly busy, sometimes overwhelming for the inexperienced, but always very organised, precise, carefully conducted and thereby highly supportive of learning. One of the hospitality students interviewed had worked 36 shifts at the convention centre (in excess of 150 hours). Some had worked the minimum of 16 shifts in one organisation (half of the 32 required for the Certificate III in Hospitality program). Others had worked fewer. All had worked at least five shifts. The cookery students worked specified numbers of hours for their program, typically 100. The students interviewed were getting close to completing their 100 hours.

Generally, none of these 14 interviewees (male and female aged from 19 through to 55 years), could describe examples of their having contributed to changing or improving convention centre practice in the sense of innovation as it was typically understood to

mean (that is, new, different and better). They were there to learn and specifically to learn how the skills they were developing through their programs were enacted in very large venues and functions, where proven systems were in operation. However, improvement and contribution were seen as personal aspects of work practice and so valuable to the convention centre and their individual skill development and employability. One of the four recent casually employed graduates, a young man in his early 20s, noted:

I feel like I've made a big change around this place just with my work ethic and just keeping a smile on my face and just always being willing to do whatever needs to be done. Sooner or later – at the very beginning when I started working here it was just – I don't know, things were a bit messy. I was always having to clean up after people. People just leaving stuff around.

Another young man described how he had changed the way he replenished the water fountains and so avoided spilling water. His new practice varied from that he had originally been shown. One young woman noted how she had changed her perspective on her work when she was asked to serve at a wedding, something she saw as a more personal function compared with the corporate events at which she had worked previously. Another young woman described how she was now carrying three plates confidently through service, a task she had previously been unable to master.

Being innovative or substantially contributing to improving convention centre systems and practices was not possible or required. Only two instances where practice could be improved were noted. One of the recent graduates, now working casually, noted that the convention centre could improve its orientation practices for new placement students and casual staff. This observation was made on the basis of a previous student-placement experience at another workplace, where more formal induction arrangements were conducted. In the second instance a young cookery student, reflecting on her methods of vegetable preparation, stated:

Sometimes I think this [my way] is a good way but this is their kitchen and they're more experienced. I think I can just wait and follow the order, and when I'm good or get used to it, I can say my opinion maybe later.

Overall, placement students at the convention centre could not see or recall how and where work-practice improvements could be implemented (other than those very few mentioned above). This was not surprising since students were essentially unaware of the positive impact they were generating. They were subject to highly ordered, systematic approaches to the work in which they were engaged and saw themselves as learners who were relatively privileged to work in such uncommon systems and who might secure valuable casual employment if they acquitted themselves well.

## Student Support Unit

The Student Support Unit (SSU), the focus of this case study, is part of and situated within a large high school in south-east Queensland. This secondary school caters for a highly diverse population and explicitly pursues an inclusive philosophy. So-called 'special education' programs are run on site in purpose-built facilities. The unit is a semi-autonomous facility in the school, which educates and cares for disabled learners and those with a range of 'learning disorders'. The SSU has its own specialised staff, with

teachers based in the high school attending the unit to conduct classes aligned to national and state curricula. Administrators, carers, teacher's aides and transition staff based in the unit attend to day-to-day care and learning support and also develop and manage transition arrangements for the students.

To build this case, interviews were conducted with the high school principal, key members of the SSU leadership team (two), an administration officer, teacher's aides (11) and teachers (four), a resource officer and VET placement students (nine).

Overall, 28 individuals were interviewed over several extended visits to the SSU during school hours.

## VET student placement

A number of students from higher education and VET institutions undertake work placements at the Student Support Unit. Pre-service teachers from higher education institutions complete practicum requirements in the high school, including in the unit, and relatively large number of VET placement students also undertake work experience in the unit. These students are enrolled in qualifications from the Community Services Training Package, predominantly the Certificate III in Education Support, the Diploma of Community Services and the Diploma of Youth Work. Enrolled with both public and private providers, the students are placed for up to 200 hours in the SSU. These placements are predominantly part-time and usually take place in 'blocks' of up to 100 hours.

In terms of the kind of work done at the SSU by the VET students, the majority is direct learner support in classrooms. The placement students will be sent to a particular classroom and will sit with the learners to help interpret the learning requirements and monitor and provide feedback on learner progress. On occasions, learners become disruptive and it is expected that up to a point the attending placement student will manage the behaviour, although teachers and SSU teacher aides become involved if the learner becomes unmanageable. The VET students may in addition be asked to become involved in extracurricular activities within the unit. For example, the SSU houses café facilities and supplies coffee and other beverages to high school staff. Diploma students may participate in wider community and transition program activities, involving travel with staff in the local area to support SSU students. All of the VET placement students took their breaks in the staffroom along with teacher's aides, teachers, administrative staff and members of the leadership team.

## Leadership views on VET students placement and innovation

Three senior staff were interviewed to obtain an organisational perspective on VET student placement in the SSU. The high school principal was interviewed, along with the special education programs (SEP) transition officer. The principal had a detailed understanding of the operation and role of the SSU, while the SEP transition officer had a leadership role based within the SSU and had direct responsibility for coordinating VET student placements and liaising with their VET providers.

Each of these staff enumerated the benefits of the work experience for the VET placement students in terms of providing opportunities to put into practice what may

have been more 'theoretical' content learned with the provider. According to the transition officer, the benefits of VET placement students for the SSU were clear:

Certainly extra hands on deck is the most obvious one. Because of the large proportion of students with barriers to their learning, whether it's a verified disability or other complications in their lives, the more adult support that they can have in a learning environment, the better. So where students are working in classes supporting students with their learning, that's a huge benefit to our students.

In terms of the VET placement student contribution to innovation at the SSU, the senior staff identified contributions that reflected a seemingly SSU-specific understanding of innovation. Asked whether having VET placement students allowed the SSU to be innovative, the principal replied:

Certainly. In terms of supporting our students, it allows us to be a bit more creative in the ways that we group our students or manage our student learning activities just by the sheer numbers of people who are available to support anything creative. That's in any learning environment I suppose. I remember a long time ago when I was teaching I could always be a lot more creative and innovative in the classroom if I had more adults in the room. So as a teacher I'd always put my hand up to take the hearing-impaired kids because I knew I would get a hearing-impaired teacher and a teacher aid, which just allowed us to be a lot more creative and to do group work where I've got support around the room.

So I know the teachers here have a similar experience. The more teachers in the room, the more creative they can be. For example, something we really encourage here at [the SSU] is using the outdoor environment to enhance the learning programs. If you've got 20 kids running around out in the paddock, having more adults to support that learning is – it's much easier to do those creative and outside of the box sorts of things ... So that's the example I can think of that makes it easier to be creative and innovative.

## Staff views on VET student placement and innovation

Eleven Student Support Unit teacher's aides were interviewed. The VET placement students were predominantly working in teacher's aide roles and the aides on the SSU staff regularly encountered the students. While a few of the aides saw the students as novices in a passive learning situation, most indicated that the placement students brought something to the unit. These aides explained that they learned from the ways the VET placement students interacted with the SSU students. According to Tracy, for example:

I'll watch them and I'll go, 'Now how, what can I use? What am I looking at? What can I use in my work? What do I need to brush up?' Because we're always looking for a way to do a better job ... I pick up a lot from the students that come in here. A lot of them [are] younger than me and once again these young people from the placement students coming into the schools, they'll have different communication techniques and I'll look at how they're communicating with my young people and see how can I modify my behaviour.

Pam explained that:



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**Placement students sometimes brought new, updated knowledge to the workplace that could be shared with employees.**

You sit back and observe and you think, 'Oh, I haven't seen him [a high-needs SSU student] react like that before'. Maybe that's something you might take on because that child reacted really well to that. Or it could be a negative reaction and you think, 'Oh well, I'm never doing that'.

... people learn through observation. That's pretty much all we do with our TAFE students. We're observing whether they're handling themselves correctly. Sometimes you might have to remind them that you can't go that far, that we're limited to certain things.

Recalling one placement student, Loretta said:

Here — sometimes I think I know it all, I've been there, done it for so many years. When she [the placement student] come in I watched her and in a way I got a little bit jealous. I thought, 'Hold on, those kids don't normally accept anyone.' Then I — we were talking and I said, 'What did you do?' I thought, 'I've not done that.' I've had to struggle so hard to get where I am and I got a little bit jealous that she just seemed to come in and do it.

According to these and other aides, a key challenge of their work was understanding how individual high-needs students react to different situations. Some of these students remained a 'mystery', presenting ongoing difficulties for the aides. By observing how the placement students interact with the SSU students, the aides would learn what would and would not 'work' and modify their own practice accordingly. It was reported that this kind of learning by the aides was mainly by observation; rarely was there follow-up discussion after the observation. But there were other ways through which the placement students introduced change. In some cases, placement students would bring new knowledge. Cindy illustrated:

It depends what they've been studying. Now most people, if you've just done a module on work place health and safety, that's at the front of your mind. I have gotten from students where they've gone, hey we don't use that procedure anymore. Or it turns out our policies and procedures need updating. It could be a very recent set thing. New legislation could have gone through a couple of weeks before and it hasn't gotten into the [SSU] just yet.

*So the placement students can make you aware of these changes?*

Yes, yeah of these changes. Sometimes their information is more recent than the information that we're given at our professional developments.

Aides at the SSU were also attuned to the special skills possessed by the placement students. Judy spoke of a placement student who was an experienced barista.

I've seen things like — one of the girls that came in was a barista, so she'd brought some of that with her. Because we do the coffee here of a morning she was able to impart some knowledge there and work with the students in that area, encourage them.

*Apart from the students here learning from her, did any of the staff learn anything from her?*

Yes, yes. She was able to work one on one with some staff and give them some training, which is good because she's no longer with us. Other people have stepped up and have been able to help students in that area.

The four teachers interviewed for the research were 'based' in the mainstream part of the school but visited the SSU to deliver the mainstream educational curriculum, including VET in Schools curriculum. The teachers as a group had fewer interactions with the VET placement students and indeed were not always sure whether an education support worker was a teacher's aide on staff or a VET placement student. Three of the teachers believed the placement students contributed little to their own practice. However, one of the VET in Schools teachers was more aware of the difference between the aides on staff and the VET placement students, perhaps as a result of spending more teaching time located in the unit. Like most of the aides and in contrast to the other teachers, Tracy learned from observing interactions between SSU students and the VET placement students:

Yeah, there's things that I've noticed with some students that I haven't quite clicked with but they've clicked with them and gone okay, what have they done that has worked that I can try. I've definitely tried a few things. They haven't always worked but I've definitely taken that on board and tried to incorporate that into my teaching as well. Some of them have been successful. Some of them have improved and also it depends on the kids as well as to if it works or not.

## VET placement student views on their work and innovation

Eight VET placement students were interviewed for this research, three studying the Certificate III Education Support, three studying the Diploma of Community Services and two the Diploma of Youth Work. Five of these students held prior VET qualifications in a range of areas, including hairdressing, hospitality and community services. All lived in the local area and were enrolled at one of three VET providers: the local TAFE institute and two private RTOs. The students ranged in age from 23 to 50 years and all but one were female. Only one of the students felt they did not see any ways to make improvements at the SSU. This younger student, studying her first qualification, did not think it was appropriate for placement students to make suggestions, but rather they were there to learn. However, the other six students were able to identify ways in which practice could be improved at the SSU. For example, Leanne (aged 36) said that:

I definitely see improvements ... even though they're fantastic teacher aides, but they're a lot older. They're not in with the new age way of doing things, but because they are older you respect them ... You don't try and say, 'Hey, look, new research has come in to say this is a better way of doing things.' You just let them go at their own thing but, yeah, definitely ... we bring in maybe a bit more youth, maybe our communication and our mindset is more related to the students as such.

Nora (aged 50) was initially reluctant to talk in terms of ways in which teachers or teacher aides could improve their practice, but as the interview unfolded she offered very specific suggestions. She observed that the teacher aides on staff tended to act as scribes for students with high needs, but that this practice had disadvantages:

I just find concentrating on just one child ... to help them and write for them and so forth, I just feel that maybe they should be more encouraged to write themselves, rather than the teacher's aide sitting down, writing for them. I think we should be allocated to — if there's a few students that need, because I find that in a few classrooms there's at least three of them that need help.

I felt – and I didn't want to do it on my own bat, but I felt like I could just sit with this student for a little while, try and encourage them to write themselves and talk through it. I always say to them, 'You tell me what you're doing, teach me what you're doing.' It encourages them to gain the knowledge of what they're doing.

Then the second child – stay with him and then go to the next child. Spend a little bit of time with each student through the class. Does that make sense?

For Nora, encouraging school students to do the work themselves would improve their learning while at the same time allowing the aides to help a greater number of the students.

Three of the placement students discussed possible improvements outside the classroom setting. Ashley (aged 26) believed that acknowledgement of and support for diversity was wanting in the unit. He said:

They can definitely update the policy here so that LGBTI people feel welcome. There are young people here who ... cannot express their sexuality. The centre should be like society where there are gay people and all kinds of people. The centre should be more open to the diversity that is out there in society sort of thing.

Rebecca (23) attempted to start a lunchtime homework club for the students. She explained that there was a homework club in place, whereby SSU students could stay back for 30 minutes after school to catch up on homework and be supported by unit staff. But many of the students who would benefit from this kind of support had to leave at the end of the school day. Rebecca believed that if a homework club was offered during lunchtime more students could benefit. Although her idea was welcomed by staff at the SSU, it had not progressed, due, Rebecca believed, to problems with staffing such a program.

Another student, Katie (aged 33), reflected that sometimes teachers and teacher aides unintentionally created problems when they interacted with SSU students who had very specific behavioural 'triggers'. She provided examples where, had the staff member been aware of the trigger, then a major disturbance could have been avoided. Katie thought that if staff had access to some kind of record of students with specific triggers then some issues could be avoided.

Leanne (34) was the only placement student interviewed who felt confident about approaching staff at the SSU with suggestions. The rest did not see discussing possible improvements with staff as part of their role. Indeed, there were cases where students were told by staff that it was not their place to 'interfere' with the way the classes operated. Nevertheless, as became apparent in the interviews with centre staff (considered above), the practices of the students could prompt changes in the practices of the staff.

## Childcare Centre

The Childcare Centre is a suburban-based childcare facility in a highly populated metropolitan area of south-east Queensland. It is part of a chain of such centres throughout Australia and more specifically one of a group of 12 in a designated area. It services the childcare needs of children aged 0 to five years, typically those who are yet

to attend school. Before and after school care is also offered. The centre manager reports to the area manager. The centre has a permanent staff of 13 childcare educators and administration staff. Casual staff are regularly employed and the centre manages a pool of on-call staff to enable it to meet fluctuations in the numbers of children. At the time of this study, the centre was employing an additional three to five childcare educators, with 16–18 staff working on any single day.

Interviews were conducted with the assistant manager, the early childhood teacher, one junior and one senior staff member, four vocational placement students and two training provider instructors. In total, 10 individuals were interviewed during several visits to the centre and the training provider campus.

## VET student placement

The centre accepts vocational placement students from a large public training provider in the area. These students are predominantly undertaking Certificate III and Diploma programs in Early Childhood Education and Care. As part of their programs, students are required to complete a minimum of 120 hours of work placement for the Certificate III and 240 hours for the Diploma. Typically, students attend one day per week on campus with the training provider in classroom settings and one day per week at their work placement. A work placement day can be up to 7.5 hours but is often less. The majority of students are part-time, with some studying fully online. All course units in the qualification require work-based assessment and so students are encouraged to pace their work-placement experiences with the graduated assessment requirements of their program.

Students are not included in the centre staff ratios and so bring an 'extra pair of hands' to the work of childcare. This enables welcome additional opportunities for children and staff. It can also mean additional work, since centre staff consequently need to address the learning requirements of placement students. Childcare centres are typically very busy places, with the needs of children many and constant. Under the leadership of its current director/manager, who has been in the role just under two years, the centre has been taking larger numbers of placement students. Having three to four students at the centre on any week is now common.

## Leadership views on VET students' placement and innovation

For centre leadership, the student-placement process was an essential component of the centre's work and development. The benefits of student placement were visible on a daily basis: the practices that past students had initiated were now part of the fabric of the centre. The benefits accruing from student placements were equally evident in the activity of current students. On most days there was at least one student (and usually more) on work placement.

In terms of the legacy of past students, improvements to the grounds and gardens and how they were utilised by the children as both play zones and learning opportunities were permanent and visible, as demonstrated in the physical arrangement of the gardens and the compost bins and recycling practices adopted. It was also evident in the healthy foods posters and associated practices of the children, who all brought their own food to the centre, and it was evident in the increased engagement of parents in the development and diversity of the learning zones in each of the rooms and the degree to

which staff were supporting the placement students with the projects they completed as part of their training requirements.

In terms of the daily activities of placement students, their presence in the centre meant additional support in the care of the children. Placement students brought different cultures and languages into the centre, different music and songs and different interests, life experiences and perspectives on play and learning. In general, their contributions were strong and welcome. The assistant manager commented:

Sometimes it's difficult having students who don't want to do anything because they're afraid of getting things wrong and they can slip into being another child to look after ... mostly they have new and fresh ideas, the theory is there and they're wanting to put that into practice and we get to watch them go from being sometimes shy to confident educators leading group activities and doing all sorts of new things with the children ... we need students to be doing that. We can get so stuck in our ways, dealing with the day-to-day care of the children so we try to be open and encouraging of the students. We're all learning together.

The early childhood teacher noted:

I've got a student like that at the moment and I'm learning from her, her ideas are amazing ... but all the students we get are quite good; they've all got something to contribute. They make you appreciate that, when you're so busy, bogged down in the paper work and stuff like that, you need to refresh.

The centre leadership team expected the contribution made by the placement students, a contribution arising from students' different personalities and their diverse experiences, which could all be harnessed for the benefit of the children in the first instance and for the centre more generally. The VET program requirements also contributed to the centre: the need for assessable projects based on relating with children, with parents, with learning resources and with centre practices represented opportunities for placement students to do new and different things. Some projects, such as those related to sustainability practices, had led to more permanent change in the centre. Others were more temporary and emerged from children's learning experiences in specific rooms. Installations and resources were constructed and made accessible for a short time and then removed as a result of the constant flux of operations. The contribution of placement students to improvement, large or small, was expected and managed, witnessed and appreciated.

### Staff views on VET student placement and innovation

The centre staff held similar understandings and expectations of placement student contribution to innovation to their leadership team: innovation was expected and was seen as primarily resulting from meeting the formal work-based assessment requirements. As much as the placement students generated it and as much as the centre benefited from it, it was the children and their needs who were the primary reason for the kinds of new and different approaches and practices staff generally described as innovation. The dynamics of the centre, the mix of staff and children, the relationships, the energies, the constant movement all generated a challenging and lively experience for the placement students. The staff described the placement students as needing to be alert, adaptive, quick, approachable, helpful, aware of others' needs and ready to cope with 'being thrown in at the deep end'.

As the senior lead educator, with 25 years of experience, stated:

Most placement students are good, some are great – they all get in and do it. Some take a little longer. The older ones [25–30 years] are usually a bit quicker and they all make our work easier. I'm there to help them as much as instruct them. And they help me – bringing new ideas, making suggestions, picking up on things and taking them to the next level ... and the children grab hold of it, the parents love it.

She then went on to illustrate her claims by using different examples of student-initiated improvements that supported the children's play and learning and complemented her own practice. Some of these examples were directly related to the activities underway at a particular time; some were student assessment-based projects; and some were initiatives students had witnessed in childcare centres where they had previously completed some placement experience. It could be small or large and have lasting impact and might not be perceived as 'innovation'.

A junior staff member, a male in his mid-20s, emphasised that students were there to learn and that the new and different contributions they made were not always innovative. Through their practice experience, placement students were improving in areas where they felt they needed improvement, which included relating to parents, to other staff, to the employer organisation and to children. As they improved, students generated a greater impact and often that impact involved being of more effective assistance to those around them. Helping, sharing and responding to requests were key aspects of this assistance. He indicated that placement students could be innovative at the centre because the centre itself was generally innovative. As he noted:

The staff here put a lot of effort into trying to make learning as fun as possible and they work hard at implementing that every day ... taking things further ... there's plenty of scope to be innovative.

Childcare is necessarily a creative practice and so innovation must emerge.

## VET placement-student views on their work and innovation

The four students interviewed were all close to completing their qualification. All were female – two in their 20s, the other two with children of their own and in their 30s. All were looking to work in the industry and were confident they would find employment. They described the centre as a 'great place', where they were encouraged and supported to bring themselves and their ideas to the work of childcare. They understood their role as learners and supernumerary to the centre and the kinds of constraints and opportunities this afforded them. The message from their training provider was that the placement experience was central to their qualification and it was clear that all units were assessed in the workplace. Additional to this was the notion of the placement as the 'best job interview' you could get. To do well on placement meant securing the qualification, and it could also mean securing employment. They enjoyed the capacity to negotiate their hours at the centre to accommodate their family and work commitments. Three of the four had undertaken a placement in another childcare centre and were aware of some the different kinds of practices that could be enacted.

All four of the students shared similar understandings of innovation and how it was pursued and accomplished as part of their placement experience. The work and their qualification required that they be 'innovative'. One of the students described

innovation as 'improvement, not throwing something completely over and replacing it but bringing new knowledge and information in and slowly building something up into something different'. These ideas of building and the connecting were shared, with one of the students stating: 'Innovation is collaborating with others to turn ideas into actions. So it's something that stems from one thing into a broader, whole approach ... a working together'.

The centre was viewed as a place where that possibility of working together and 'connecting' was realisable and was also described as 'somewhat' innovative, which was partly attributable to its being necessarily responsive to the new early childhood framework, recently instituted by the government regulator. This framework was perceived as generating the new structures and practices that supported improved childcare, and staff were seen as highly creative, with the capacity to encourage innovative learning and develop the guidance plans that secured improvements through greater responsiveness to the children and in closer relationships to the parents. These kinds of improvements – innovative activity – were seen as organisational and mandated and therefore compliance-driven, and were integral to documenting and evaluating the kinds of play and learning experiences that centre staff were constantly developing to ensure favourable outcomes for the children in their care.

For the students, innovation as a personal practice was more aligned with the activities they developed with the children and as were required by their program assessments. Sometimes this occurred one on one with children and sometimes it occurred through group activity; sometimes it was developed and shared with centre staff and sometimes it was solely individual. The shared and collaboratively developed experiences often related directly to the room in which they worked and included creating spaces and setting up resources and inviting children into these activities. On occasions, innovation activities involved a focus on a specific child, digging deeper into the kinds of interest and understandings they were exploring. As a consequence, indoor beaches were built, plumbing and the movement of fluid through pipes were explored, garden beds were built, rubbish was categorised and separated into different bins, and stories were written and illustrated. All the collaborative efforts that enabled these creative endeavours were necessary but could often be difficult to generate since working together is not guaranteed.

## Suburban Hospital

Suburban Hospital is part of a group of private hospitals in Australia and includes several in the state of Queensland. The group has a national workforce development team with coordinators in each state. The organisation is currently investigating ways to avert a looming workforce crisis as a large proportion of the nurse workforce nears retirement. Among these strategies is one taking shape in Suburban Hospital. Here, Queensland state and local workforce development personnel have partnered with a large public provider to develop a tightly integrated nurse education, development and recruitment model. This case was built up over visits to Suburban Private and interviews with leadership personnel (three), organisation staff (three) and students (five) who had just completed their final placement. Eleven interviews were undertaken in total.

## VET student-placement organisation

The model has been in place for nearly two years, with several cohorts of students having been through the process to date. Places in the program are sought-after and hospital staff have a role in selecting students for the Diploma of Nursing program, which leads to eligibility for employment as an Enrolled Nurse (EN). Students spend time in the classroom and in simulated clinical environments and at least 460 hours on placement in hospitals that are part of the group. Students study a formal program for three months, after which they begin their first placement. Two other placement blocks are undertaken, interspersed with formal study. The duration of the program is 18 months, and the graduates from this program are preferred for employment by group hospital recruiters, although employment in one of the hospitals is not guaranteed upon successful completion of the program.

## Leadership views on VET student placement and innovation

Leadership views were elicited from the state workforce planning manager and two senior coordinators based at the hospital. These interviewees all saw student placement as integral to workforce development and planning, with future shortages obviously a concern of the team and with the current model of student placement a central way of managing the problem. The state manager explained that the hospital group opted to partner with an RTO – a public provider – that produced particularly highly skilled students:

I often get all hospitals saying back to me that they are coming out at the level and skill of that of a university student. So they're being really, really well prepared. In some instances hospitals even say the VET sector is preparing them better than the university.

Asked whether the placement students brought new skills to the staff they work with this manager replied, 'Without a doubt, yeah, because they thought-provoke [sic] our current staff to think about new and better ways to do things'. When asked to elaborate, the manager commented:

More clinical skills, so that's probably where I'm going with that, that they might come in and say, 'Look, we've been taught at TAFE that there's a different way to do an injection now as per best practice', and our hospitals haven't come around to that new information as yet, so they bring that into the hospitals. So that's probably more clinical skills side of things rather than cultural side of things. It's just making the current staff think about the way they do things and can it be better, so have they been doing something a certain way for a very long time that may now be done better.

To the same question, one of the senior coordinators explained that the students improve the skill levels in the workplace through their effect on existing staff:

I think they make the staff more accountable. So I think that the staff actually sometimes will take a step back [and think], 'Maybe actually my practice ... I need to pick up my practice a bit', because they might have got into bad habits. So I think that having students – even from a nursing point of view, I know that when I have students that 'I'm by the book' you know.

The other coordinator emphasised the currency of the placement students' skills:



Students ... they're the most current, they're being taught the most current best practice. So I think that when they're out there it does encourage staff to follow that and be more aware and more policy-driven ... For example, [students] maybe have had a placement day, or a prac day, in the classroom, and then the next shift they're out on the floor. So [are] able to put what they've learned in the classroom into practice the next shift.

Leadership views, then, are that placement students bring up-to-date knowledge and techniques to the workplace. Existing staff may be inclined to be more reflective when the students are in the workplace and notice new ways of working and potentially ways of working that are more compliant with current policy.

## Staff views on VET student placement and innovation

Three host organisation staff were interviewed for this case study. Their perspectives on the potential of the students to introduce new skills and practices to the workplace echoed those of the leadership group. One nurse observed that the placement students tended to alert staff to changes in policy:

For example, nurses have been taking dressings off for years; policy has changed, maybe on a yearly basis, depending on what sort it is, so the policy changed from clean gloves to sterile gloves, but maybe the message wasn't spread or people didn't look at the policy, and then all students get taught in the class, they take the message to the [nurses] saying, 'Oh, it's a surgical dressing. I have to wear sterile gloves', and the nurses said, 'No, you just have to wear clean gloves', so the students said, 'All right. Can I just show you the policy because that's what ...' [So] they bring in the latest information to the nurses in that case, so the nurses look up the policy and yes, the policy that recently changed says it's a surgical dressing, so you wear sterile gloves. So there it is, they learnt something, whether from a student, I think it keeps it interesting for the nurses.

Asked whether the students bring new knowledge and skills, another nurse replied: 'Yeah, definitely', explaining:

They'll often challenge things that older, more experienced nurses do and take for granted ... a simple example is nurses who've graduated more than a few years ago [and who] will, as standard, alcohol-wipe every injection site before they do it. That's actually not the best practice, and so where the students are coming through and they're instantly saying, 'Oh, they taught us not to do that ...' And so they'll of course come and question us. Often they'll be gutsy enough to question the nurses on the ward, and so we've had to make some adjustments and offer some education [to the existing staff].

The students in these examples bring either new techniques or up-to-date knowledge of hospital policy – or both. At this hospital at least, staff are sensitive to discrepancies in procedures, and placement students highlight the discrepancies. Obviously, many discrepancies are identified as a result of the students' learning.

## VET placement student views on their work and innovation

Five VET placement students were interviewed for this case study, all of whom had recently completed the final placement in their Diploma of Nursing program. One of

these students possessed prior qualifications (VET sector certificates and diplomas); all had previous experience in the workforce, some with diverse experiences, including parenting. The students interviewed were aged between 25 and 49 years and all but one were female. The students' suggested improvements need to be considered in the context of a highly regulated, knowledge- and skill-intensive field of practice, one subject to ongoing change. In addition, practitioners in this field have a legal obligation to practise only what is in their 'scope' and according to the technical and ethical standards for which they are held personally accountable. These students observed practices that did not accord with their training, and noticing and dealing with such discrepancies was a prominent part of their placement experience. A typical response to questions about whether there were discrepancies between what they learned and what they saw in practice in the host organisation came from Janine (aged 39):

Absolutely. I mean there's [sic] nurses that have been trained a long time ago that might not be trained in the same way that we were. So we certainly have things that we did differently and we'd have to say to them: 'Look, we've been asked to do it this way', and we would show them, and some of them took that on board and said, 'Yeah, that's a really great way of doing it.' Some of them rolled their eyes at you. You just had different responses, depending on the nurse, but I think that just comes down to, because nursing is such a progressive industry, it's always changing.

Several instances were described where the students had learned procedures that were different from those practised on the wards. One technique described by several of the students was in relation to a new procedure for disinfecting injection equipment and sites. Katrina (aged 29) explained that:

A new sort of best practice we were told they were looking to ... implement at [the hospital] is that we would have to swab ... when you're giving IV [intravenous] therapy, you'd have to swab a bung with three different swabs ... the first would wipe the first layer of dirt, for particular reasons, and then the next, and then by the third hopefully you've got rid of any germs or ... that can cause infections. Now no one on the wards were [sic] doing that, nobody did that, and you'd get looks. You'd get looks from them like, 'What are you talking about?' and they do that, I think they do that for pick lines, which is a different type of line, like a more central line, not a peripheral IV line ... So when you're on the wards and you're doing that ... you would say: 'Look, I have to swab this three times', and they're like, 'What?' and it's like, 'Well this is what they're trying to bring into the hospital. This is what they're telling us now to do.'

Other updated or new techniques the students were expected to practise related to infection control for subcutaneous injections, medications management during shifts, and flushing IV equipment with saline solution. Manual handling of bed-bound patients was another area where new techniques were being taught, as Janine noted:

There was some manual handling stuff, in terms of using the slide sheet, but I would say that they have been trained in the new way as well because that's something that they would keep the nurses up to date with. So ... instead of folding the slide sheet in half we have to use two slide sheets. Because it's less stress on our backs and less work for the patient, to move up the bed. They didn't like to do

that, some of them, they liked to do it the old way, which was to fold it in half and slide them up that way.

Apart from learning and demonstrating new medical knowledge and skills, the placement students would see other ways to improve practice. Louise (aged 35), who had a background in business, believed there was too much waste:

Just, I suppose, you know, from the business point of view, I understand it's a business and it's run like a business, it still has to make money. And the whole wastage thing and not being wasteful and all the rest of it.

Louise also felt that people skills were sometimes wanting in the staff:

And you know, I've encountered people where I've looked at them and thought, 'Are you nursing because you're really passionate about caring for other people or are you nursing because it's just a job?' I think nursing and people who become nurses are definitely people who want to make a difference. And it doesn't have to be a big difference, but you're making a difference, and that's what's important.

Placement students at Suburban Hospital were thus aware of the fact that they were sometimes bringing new skills and knowledge and more up-to-date knowledge of policy to the staff. Staff and leadership were also aware of this process of knowledge diffusion and the role of VET students in it.



# Discussion

This research set out to answer the question of the contribution of VET student placement to innovation in host organisations. The data collected does not provide a straightforward answer. Finding an answer was constrained by stereotypes about VET students that appear to impact on the extent to which these students can contribute to innovation. For some of the stakeholders we interviewed, a learner is by definition someone who does not yet know enough to undertake basic work roles and is thus unable to contribute to innovation. In their view, innovation was something that required significant expertise and/or technical knowledge and it was inconceivable that novices in these fields could contribute in this way. Some stakeholders believe that it is not the 'role' of placement students to make suggestions or provide feedback to employers and employer staff, while some students clearly felt it would be disrespectful to point out possible improvements, even though many saw them.

Part of the difficulty of arriving at a clear answer to the research question is created by the definition of 'innovation'. Using the definition of innovation provided by the ABS (2016) – *the development or introduction of new or significantly improved goods, services, processes or methods* – the data indicate that the placement process *may* contribute under *some* circumstances. To clarify the way this contribution might occur and under *what* circumstances, it is helpful to distinguish between the contribution due to the *whole* placement process, which may involve numerous students, host organisation staff and provider staff, and the contribution due to the activity of an *individual* student. In the following discussion, the contribution of the placement process itself is considered and then that of individual students. The discussion concludes with an attempt to conceptualise the findings. It is contended that VET student placement can contribute to knowledge diffusion within innovation systems as part of the broader role that VET plays in knowledge diffusion (Dalitz, Toner & Turpin 2011). An alternative notion of innovation is discussed, one that draws on the work of Ellström (2010), who advances the concept of 'practice-based innovation'. We elaborate the idea of 'practice innovation' and suggest that VET placement students appear to have considerable scope to contribute to this kind of innovation. The discussion closes with a set of suggestions for realising the potential of VET student placement in contributing to innovation.

## Contribution of the VET student-placement process

The data suggest that, when organisations take a strategic, integrated approach to VET student placement, the whole organisation can benefit. What stands out in the case studies is the role of VET student placement in what may be termed 'organisational agility'. Here, improvement does not obviously arise from the knowledge, experience or disposition of individual placement students but rather from the flexibility that the placement process as a whole can offer organisations to respond to changes in their environment. This contribution seems to go beyond simply using the students for 'cheap labour', because considerable work is required to deploy students as a group in a way that promotes organisational agility. What appears to be required in such a case is a high level of structure, effective leadership and well-established active relationships with providers.

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**When organisations take a strategic, integrated approach to VET student placement, the whole organisation can benefit.**

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**Most improvements in host organisations that were attributed to VET placement students were small-scale.**

The Suburban Hospital, Global Hospitality Services and Student Support Unit cases are instructive in this regard. In each, organisational agility is crucial for responding to opportunities in volatile environments. Such agility is considered an important element in organisational innovation and in these case studies VET student placement plays a central role. However, in each case considerable investment and planning precedes instances of organisational agility. Relationships with training providers must be well developed; providers need to have a good sense of host organisation requirements – from knowing what the organisation requires in placement students, to anticipating fluctuations in demand and to developing flexible, customised programs for and with host organisations. Personal relationships between provider and host staff also appear to be important. These host organisations each employed dedicated and highly active staff involved in managing VET placement students and who appeared to have good knowledge of the VET system, what was required of the placement students in relation to study and assessment, and who were well known to the students themselves, all of which facilitated effective communication on a day-to-day basis.

In the literature review we considered research and policy that emphasises the value of strong host organisation/industry relationships with RTOs, and the potential of RTOs to create value through the supply of skills, by means of placement students, graduates and the activity of provider staff directly upon host operations. For example, Callan and Ashworth (2004) describe the importance of partnerships between organisations and RTOs for driving improvement and innovation, while Curtin and Stanwick (2011) conceptualise the contribution of RTOs to organisational improvement in three ways through: the supply of vocational skills; the development of underpinning competences such as learning to learn; and the function of VET in ‘innovation systems’, linking organisations through VET providers to wider networks. The findings of this project are consistent with these conceptualisations.

## **Contribution of individual students**

Many of the improvements in host organisations that could be attributed to the input of VET placement students were small-scale and were only registered at the local level by individual staff members. For example, in the Student Support Unit case, many examples of change in practice were reported by teacher’s aides, who observed placement students interacting with SSU students. For the aides and one of the teachers, the placement students could demonstrate new ways of working with SSU students who had proved difficult to ‘work out’. In these cases, new ways of working with the SSU students would ensue and mark a permanent change in how the staff interacted with the SSU students. For their part, the placement students were not always aware that they had been instrumental in creating improvements. The aides in particular reported very little opportunity for discussion with the placement students about problematic students in the unit. (Indeed, it seemed there was little opportunity for discussion among the aides, such was the demanding workload at the unit.) In a few cases, VET placement students at the SSU pointed out details of, for example, national legislation bearing on the case of disabled students of which SSU staff were unaware. In these examples, placement students were to some extent at least articulate about and aware of the fact that they were introducing knowledge or practices that were new to the staff. In this case study, individual staff in direct contact with the placement students would change their practice or update their knowledge, despite no system in place to promote wider

dissemination of improvements. Such a dissemination system was more evident at the Childcare Centre, where placement students were able to integrate their qualification assessment requirements with the centre's practices. Some assessment projects created semi-permanent additions to the centre (for example, healthy food choices programs, rubbish recycling practices, temporary indoor beaches) that were visible to and adopted by all at the centre. Suburban Hospital was a notable case in which the leadership, staff and students were all aware of student contributions to the knowledge and skills of staff. In this case, it could be concluded student placement was an accepted part of the knowledge-diffusion process.

The smaller localised contributions of placement students could be due to the direct transfer of knowledge and techniques from learning in VET programs, such as knowledge of new legislation, occupational health and safety regulations, learning theories or clinical developments. They can also be due to knowledge and practices developed in prior work and learning settings not directly connected with the kind of work currently being undertaken by the student, such as experience in the hospitality industry providing insight into more efficient procedures in electrical work. In some examples, life experience or personal dispositions were the source of the improvement. In each of these examples, an existing workplace practice is altered for the better through the agency of a VET placement student. Although these contributions tended to be modest in scale, they may also amount to significant improvements. When a change in the way a disabled student is approached transforms a challenging situation into a positive one, a true innovation has occurred when measured against the mission of an enterprise like the SSU. Yet such an innovation may well remain at the 'micro' level – a significant improvement in the life of one person, initiated by a VET placement student and registered by only one or a few staff in the host organisation.

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**VET placement students made a distinct contribution to knowledge diffusion – bringing updated skills and knowledge into the workplace.**

## Conceptualising the contribution of VET student placement to innovation

If the focus is shifted to the contribution of VET to *innovation systems*, it is possible to identify a distinct contribution of VET placement students to knowledge diffusion. Research by Dalitz, Toner and Turpin (2011) identified ways by which VET contributes to innovation systems, conceptualising this contribution in terms of 'knowledge diffusion'; that is, providers are in possession of specialised knowledge and can facilitate transmission of this knowledge in various ways. Although Dalitz, Toner and Turpin (2011) did not consider VET student placement as a possible mechanism of knowledge diffusion, our data furnishes evidence of knowledge diffusion effected by VET students on placement.

We suggest that VET student placement can be considered an element in the contribution that VET as a whole makes to knowledge diffusion in Australia's innovation systems. A clearer understanding of the role of VET student placement in knowledge diffusion might allow host organisations to systematically absorb knowledge introduced by students, but for this to be achieved some powerful stereotypes affecting host organisation staff, provider staff and the placement students themselves, as identified above, would need to be addressed. We also note that we found little evidence that provider staff involved in the student-placement process played a role in knowledge diffusion. Dalitz, Toner and Turpin (2011) suggested that provider staff, due to their high

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**VET student placement may contribute to 'practice innovation' – new ways of doing things that are integral to everyday work.**

levels of vocational skill, are important elements in knowledge diffusion, but our research indicates that the provider staff involved in student placement were not making this kind of contribution. Conceivably, a distinction could be drawn between the types of relationships considered by Dalitz, Toner and Turpin (2011) and the largely administrative involvement of the provider staff in our research.

Apart from potentially playing a part in knowledge diffusion, VET student placement may contribute to what might be called 'practice innovation'. By this term we mean new ways of doing things that are integral to everyday work in an organisation. It may be that practice innovation is relevant for enterprises concerned with learning, care or wellbeing: the majority of our case studies were undertaken in host organisations for which the goals of individual or community wellbeing were dominant. In these cases, quality outcomes are envisaged in terms of improvements to individual and collective quality of life. Achieving such outcomes was not exclusively a matter of undertaking routine procedures in a standardised way, although clearly some of the work can be described as such. Rather, the 'problems' brought to some of the case organisations for 'solution' were those that could not be resolved in a standardised way. Solutions – as better ways of addressing needs and enabling creative endeavour and response – were to be found in the tensions between what Ellström (2010) referred to as the logics of production and development. The need for constantly generating new and different learning experiences for children is but one example. The creativity of all relevant staff was engaged to learn from the 'problem' and arrive at a 'solution'. In this context 'old timers' were at an advantage but newcomers could also strike upon a solution (Lave & Wenger 1991). Some of the 'innovation' that we attribute to student placement is of this nature. These improvements could be highly significant at the level of the problems in question and would diffuse and be absorbed by the organisation, remaining part of the practice after the departure of the placement student. Here, a complementary notion, that of 'practice diffusion', is indicated. In the mainstream innovation literature, as noted in the review, knowledge diffusion is a way of conceptualising the innovation of an organisation. We suggest that there is another kind of diffusion that does not involve concepts, theories or technology, but gestures, responses, interactions and ways of relating that may prove a key to significant improvement.

## How to foster innovation and knowledge transfer through student placement

On the basis of these reflections on the data collected for this project, the researchers make the following suggestions for utilising more fully VET student placement as a knowledge-diffusion mechanism and a driver of practice innovation:

- Stereotypes about VET placement students should be challenged. Stereotypes, including the idea that learners do not possess the knowledge or skills to contribute to improvements and that it is inappropriate for students to make suggestions, serve to block the diffusion of knowledge and practice innovation. These stereotypes can be found among VET students, provider staff and host organisation staff.
- Providers should encourage students to make suggestions in appropriate ways if the students see potential for improvement during their placements. Providers often share the assumption that learners are best limited to observing and absorbing information and practices while on placement. Assessment task projects that involve

the introduction of new ideas, processes and practices in host organisations can be a way of realising the potential of student placement as a driver of innovation.

- Host organisations should also encourage placement students to make suggestions for improvement if students see the potential, and should ensure that clear systems are in place to gather suggestions. While many host organisation staff were amenable to receiving suggestions and feedback from placement students, the students were not always aware that this possibility was available to them and were also unsure about the process for making suggestions if they saw potential for improvement.
- Host organisations should take measures to ensure that contributions to knowledge and practice at the local level can be shared widely through the organisation. The research suggests that knowledge and practice contributions do not necessarily spread from the local level.
- Host organisations and providers could work together to challenge stereotypes, encourage suggestions for improvement from placement students and identify mechanisms for disseminating knowledge and practice improvements at the local level. At present, strong relationships between providers and organisations ensure that a number of benefits arise from the student-placement process, including facilitating organisational agility, but mechanisms could also be established to realise the potential that student placement has to contribute to innovation.

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**Stereotypes about the ability of VET students to make suggestions for improvements in the workplace should be challenged.**





## References

- ABS (Australian Bureau of Statistics) 2016, *Innovation in Australian business 2014–15*, viewed 26 February, <<http://www.abs.gov.au/ausstats/abs@.nsf/mf/8158.0>>.
- Armatas, C & Papadopoulos, T 2013, 'Approaches to work-integrated learning and engaging industry in vocational ICT courses: evaluation of an Australian pilot program', *International Journal of Training Research*, vol.11, no.1, pp.56–68.
- Atkinson, G 2016, *Work-based learning and work-integrated learning: fostering engagement with employers*, NCVET, Adelaide.
- Billett, S 2007, 'Exercising self through working life: learning, work and identity', in A Brown, S Kirpal & F Rauner (eds.), *Identities at work*, Springer, Dordrecht.
- 2009, 'Realising the educational worth of integrating work experiences in higher education', *Studies in Higher Education*, vol.347, pp.827–43.
- Callan, V & Ashworth, P 2004, *Working together: industry and VET provider training partnerships*, Adelaide, NCVET.
- Commonwealth of Australia 2014, *Standards for registered training organisations (RTOs) 2015*, (F2014L01377), viewed 26 February 2016, <<https://www.legislation.gov.au/Details/F2014L01377/Download>>.
- 2015, *National Innovation and Science Agenda: welcome to the ideas boom*, viewed 26 February 2016, <<http://www.innovation.gov.au/system/files/case-study/National%20Innovation%20and%20Science%20Agenda%20-%20Report.pdf>>
- Curtin, P & Stanwick, J 2011, 'Overview', in P Curtin, J Stanwick & F Beddie (eds), *Fostering enterprise: the innovation and skills nexus – research readings*, NCVET, Adelaide.
- Dalitz, R, Toner, P & Turpin, T 2011, *VET and the diffusion and implementation of innovation in the mining, solar energy and computer game sectors*, NCVET, Adelaide.
- Dawe, S (ed.) 2004, *Vocational education and training and innovation: research readings*, NCVET, Adelaide.
- Dewey, J 1966, *Democracy and education*, Free Press, New York.
- Econtech 2013, *Independent economics: cost-benefit analysis and returns from additional investment in vocational education and training: report prepared for TAFE Directors Australia*, TDA, Sydney.
- Ellström, PE 2010, 'Practice-based innovation: a learning perspective', *Journal of Workplace Learning*, vol.22, no.1–2, pp.27–40.
- Figgis, J. 2009, *Regenerating the Australian landscape of professional VET practice: practitioner-driven changes to teaching and learning*, NCVET, Adelaide.
- Flynn, M, Pillay, H & Watters, J 2016, 'Sustaining partnerships between schools and industry: a minerals and energy case', *International Journal of Adult Vocational Education and Technology*, vol.74, pp.69–80.
- Gelade, S & Fox, S 2008, *Reality check: matching training to the needs of regional Australia*, NCVET, Adelaide.
- Gibson, D & Naquin, I 2011, 'Investing in innovation to enable global competitiveness: the case of Portugal', *Technological Forecasting & Social Change*, vol.78, pp.1299–309.
- Guile, D & Griffiths, T 2001, 'Learning through work experience', *Journal of Education and Work*, vol.14, no.1, pp.113–31.
- Guthrie, H, Smith, E, Burt, S & Every, P 2014, *Review of the effects of funding approaches on service skills qualifications and delivery in Victoria*, Service Skills Australia, Melbourne.
- Hargreaves, J 2010, *Vocational training and social inclusion*, NCVET, Adelaide.
- Harris, R 2015, 'Quality in the Australian VET sector: what has been happening', *International Journal of Training Research*, vol.13, no.1, pp.16–34.
- Hoyrup, S 2012, 'Employee-driven innovation: a new phenomena, concept and mode of innovation', in S Hoyrup, M Bonnafous-Boucher, C Hasse, M Lotz & K Moller (eds), *Employee-driven innovation: a new approach*, Palgrave Macmillan, Basingstoke.
- Kilpatrick, S & Guenther, J 2003, 'Successful VET partnerships in Australia', *International Journal of Training Research*, vol.1, no.1, pp.23–43.
- Lave, J & Wenger, E 1991, *Situated learning*, Cambridge University Press, Cambridge.

- Laursen, K & Salter, A 2005, 'Open for innovation: the role of openness in explaining innovation performance among UK manufacturing firms', *Strategic Management Journal*, vol.272, pp.131–50.
- Lazonick, W 2005, 'The innovative firm', in J Fagerberg, D Mowery & R Nelson (eds), *The Oxford handbook of innovation*, Oxford University Press, Oxford.
- McGrath, R 2001, 'Exploratory learning, innovative capacity and managerial oversight', *Academy of Management Journal*, vol.44, no.1, pp.118–31.
- Misko, J, Halliday-Wynes, S, Stanwick, J & Gemici, S 2014, *Quality assessments: practice and perspectives*, NCVET, Adelaide.
- Morone, P & Taylor, R 2010, *Knowledge diffusion and innovation: modelling complex entrepreneurial behaviours*, Edward Elgar, Cheltenham.
- NCVER (National Centre for Vocational Education Research) 2015, *Australian vocational education and training statistics: employers' use and views of the VET system*, NCVET, Adelaide.
- National Quality Council & Council of Australian Governments 2009, *Final report: VET products for the 21st century*, National Quality Council & Council of Australian Governments, Melbourne.
- Nechvoglod, L & Beddie, F 2010, *Hard to reach learners: what works in reaching and keeping them?*, Adult, Community and Further Education Board, Melbourne.
- OECD (Organisation for Economic Cooperation and Development) 2009, *Systemic innovation in the Australian VET system: country case study report*, OECD, Paris.
- Office of the Chief Economist 2014, *Australian Innovation System report 2014*, Canberra.
- Pickersgill, R & Edwards, D 2005, 'The contribution of VET to innovation in regional industry', paper presented at the AVETRA 8th Annual Conference, *Emerging futures – recent, responsive & relevant research*, Sofitel, Brisbane, 13–15 April.
- Piterou, A & Birch, C 2014, 'The role of higher education institutions in supporting innovation in SMEs: university-based incubators and student internships as knowledge transfer tools', *InImpact: The Journal of Innovation Impact*, vol.7, no.1, pp.72–9.
- Rice, J 2011, 'Innovation in the modern economy', in P Curtin, J Stanwick & F Beddie (eds), *Fostering enterprise: the innovation and skills nexus – research readings*, NCVET, Adelaide.
- Rittie, T & Awodeyi, T 2009, *Employers' views on improving the vocational education and training system*, NCVET, Adelaide.
- Schumpeter, J 1934, *The theory of economic development: an inquiry into profits, capital, credit, interest and the business cycle*, Harvard University Press, Cambridge.
- Skills Australia 2011, *Skills for prosperity: a roadmap for vocational education and training*, Canberra.
- Smith, E & Harris, R 2000, *Work placements in vocational education and training courses: evidence from the cross-sectoral literature*, NCVET, Adelaide.
- Stanwick, J 2009, *Employer engagement with the vocational education and training system in Australia*, NCVET occasional paper, NCVET, Adelaide.
- Stone, C 2012, *Valuing skills: why vocational training matters*, Centre for Policy Development, Sydney.
- Toner, P 2007, *Skills and innovation – putting ideas to work*, NSW Department of Education and Training, Sydney.
- Toner, P, Marceau, J, Hall, R & Considine, G 2004, *Innovation agents: vocational education and training skills and innovation in Australian industries and firms – volume 1*, NCVET, Adelaide.
- Victorian Employers Chamber of Commerce and Industry 2015, *Reforming the Victorian vocational education and training (VET) system*, VECCI, Melbourne.
- Wheelahan, L & Moodie, G 2011, *The quality of teaching in VET: final report and recommendations*, Australian Government, Canberra.
- Zulch, D, Saunders, R, Peters, J & Quilivan, J 2016, 'Effectiveness of a service learning model with allied health assistant students in aged care', *International Journal of Training Research*, vol.14, no.2, pp.161–70.



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