Understanding the nature of school partnerships with business in delivery of vocational programs in schools in Australia

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Abstract: This article seeks to provide a school perspective on the nature and quality of the partnerships which schools form with businesses in order to deliver work placements and workplace learning in Australia. It found that the ability of schools to engage with external partners depended on the ability of school leaders to define and communicate the role of VET within the school and its broader community. This dependence on individuals and leadership is vulnerable to changes in key personnel and the informality of some of the processes and relationships can lead to problems in monitoring, evaluating and replicating programs. Our study shows that a balance is required between carefully documented processes and the flexibility required to operate programs successfully. The study also noted the tension between the perceived needs of the school and those of industry. A successful partnership

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necessarily requires school flexibility – in the decisions as to what programs should be offered and how work placements and timetabling should be organised.

Keywords: Vocational education and training, school partnerships, applied learning, workplace learning

Introduction

This article seeks to provide a school perspective on the nature and quality of the partnerships which schools form with businesses in order to deliver work placements and other forms of workplace learning in Australia. The growth of partnerships between Australian schools, workplaces and community organisations has corresponded to a broad policy context across Australia's Commonwealth, state and territory governments that seeks to raise the Year 12 (or equivalent) school completion rate to 90 per cent by 2015 (Clemans et al. 2005; Davies 2012; PhilipsKPA 2010). This performance benchmark was set by the Council of Australian Governments and is defined as "the proportion of young people aged 20-24 who have attained Year 12 or a Certificate II or above" (Council of Australian Governments 2009: 14). It is a benchmark established through general acceptance in research that increasing young people's participation in education and training has significant and long-term benefits for their employability, health, well-being and lifelong earnings (Business Council of Australia 2003; Lamb & Rice 2008).

Policy reforms to achieve these targets have focussed heavily on vocational and applied programs in upper secondary schools (Polesel & Keating 2011; Keating et al. 2012) as mechanisms for engaging and retaining students at risk of leaving school early. Achieving the competencies required by these targets has also led to significant demand for sites which can provide workplace learning and work placement designed to impart and assess these competencies (Cooper et al. 2011; PhillipsKPA 2010). Consequently, this has led to an increased need for schools to form partnerships with external organisations in order to ensure that students have access to workplace learning and other forms of work placement.

This article analyses data from a recent survey of teachers and school leaders working in schools involved in the delivery of applied learning and vocational education and training (VET) in partnership with non-school partners including VET providers, businesses and community organisations, to provide a school leadership perspective on the challenges faced

in the establishment and management of such partnerships. It also draws on semi-structured interviews with school principals, teachers and program coordinators. It focusses particularly on the school respondents' perceptions of the nature and quality of the partnerships which schools form with businesses in order to deliver work placements and other forms of workplace learning.

School-business partnerships in Australia

Research into educational partnerships has focussed on three main areas. The first is the broad idea of social partnerships (Seddon & Billett 2004; Clemans et al 2005), the second involves partnering with community organisations (Henderson 2011; Broadbent & Cacciattolo 2013), and the third is business's influence on schools (Ogawa & Kim 2005).

It has been argued that the mandating of school industry partnerships in the establishment of the Australian Trade Training Centres in the late 2000s served as a means both for structuring and organising the responsibilities of the external partners and for extending the responsibilities of school leaders beyond the confines of their individual schools (Hay 2009). While researchers such as Hay (2009) and Hay and Kapitzke (2009) acknowledge the value of these partnerships, they also note their role in the discourse of school to employment transitions. This discourse sees a shift occurring whereby the objectives of government policy (better transitions, lower youth unemployment) are transferred to the local school and to the partnerships it forms. This theme is also picked up by Mifsud (2016) who argues that such partnerships and networks can have the effect of impacting negatively on school autonomy within a framework of stated decentralisation and increased monitoring and central control.

It has been emphasized in the literature that industry and social partners' engagement with secondary schools provides young people with a greater chance of employment, better engagement with school and improved test results (Lonsdale et al 2011). Lee, Hope and Abdulghani (2015) found that such partnerships develop not only life and business skills but also foster enterprise and resourcefulness. The influence of education structures, families, local businesses and external agencies is also recognised as an important aspect of building better platforms of skills for young people before they leave school (Federal Ministry of Education and Research, 2013; Hodgkins, 2010). This is particularly important for young people from disadvantaged backgrounds, who are overrepresented in vocational education

and training (VET) in Australia. For the VET sector generally, the involvement of industry and business is paramount in the provision of workplace learning, curriculum, assessment and recognition of qualifications. However, effective collaboration presents particular challenges if the partnership takes place in a school context, in part because the provision of vocational education and training and the associated tasks of forming links with external providers and industry are a relatively new phenomenon in Australian secondary schools (Polesel 2007). It also presents challenges to schools which lack the "connectedness to national and global economic networks" (Hay 2009: 209).

Policy-makers now recognise the importance of building stronger connections between businesses and schools within national education policies and frameworks. For example, the National Framework for business engagement in the UK (DIUS 2008) and the Statement of Priorities for Partnerships between Business and Victorian Government Schools in Australia (DEECD 2010) provide objectives and proposed structures for greater business engagement with schools. However, relationships between schools and industry are also the outcome of labour and education systems (Polesel 2008, Murray and Polesel 2013) and are determined by distinct 'national logics' (Raffe 2012) or 'regimes' (Gallie & Paugham 2000; Pohl & Walther 2007; Verdier 2009). Iannelli and Raffe (2007), in their seminal article on the transition from vocational education to work, distinguished two ideal types of transition systems which are based on the linkages between vocational education and employment. These linkages include strong or weak partnerships between industry and schools. The authors have distinguished the systems governed by an 'employment logic' whereby vocational programs and structures reflect employers' needs, and 'education logic' systems in which vocational upper-secondary schooling has weak links with employers, and is less differentiated from the 'academic' or 'general' education stream. In countries in which strong school partnerships with employers, trade unions and other actors are the norm, non-school partners play a greater role in the design, delivery and assessment of progress within vocational programs, resulting in theoretical and practical learning being more closely aligned with employers' demands and practices. Such synchronicity is characteristic of systems governed by an 'employment logic': ties to the labour market are strong while links to higher education are weaker and less of a priority. Vocational education in an 'employment logic' system is more strongly differentiated from academic upper-secondary schooling.

Germany, Denmark and the Netherlands are exemplars of 'employment logic' systems, wherein explicit links between training, qualifications and skills are developed and social

partners – including trade unions and employers – work to facilitate successful transitions from VET to the labour market (Bosch & Charest 2008), as well as to secure the status of VET as an effective alternative to academic (or 'general') tracks. By contrast, the systems governed by an 'education logic' maintain weaker links with industry and employers as their programs are primarily focussed on the skills, knowledge and values required for successful entry into university-preparatory and tertiary education streams. Within systems premised on an 'education logic', academic tracks are valued for their potential to develop a source of human capital. 'Education logic' systems exist predominantly in Anglophone countries - including England, Australia, and the US - with a deregulated labour market and a welfare model based on minimal intervention.

In the current policy context in Australia and internationally, there is a growing emphasis on developing good practice models of interagency cooperation, including partnerships schools form with their communities. Good welfare 'safety nets' and youth services which are well connected with schools develop resilience, community links and better employment prospects for young people. They are therefore important to successful youth transitions. Lasting partnerships require a coherent policy and established practices based on long lasting principles valued by both schools and the community partners. Clemans et al. (2005) argue that successful social partnerships need to include capacity building work; shared goals; governance and leadership, and trust and trustworthiness. These processes are complex and require support and guidance. There is also a view that good partnerships depend heavily on relationships within the community, "independent of the educational bureaucracy or large industry management" (Watters and Diezmann 2013: 53). Ryan and O'Malley (2016) speak of the importance of the individual "boundary spanner" in creating linkages between the two partners and in network building, facilitating and mediating.

This dependency, however, on individuals and also on informal, less regulated processes can also be a negative factor. Pillay et al. (2014) noted that the dependence on established and informal networks can lead to weak monitoring and evaluation processes and a vulnerability to changes in key personnel. A note of caution is also sounded by Peralta (2015) whose research in the United States of America explores the potential harm to students of commercial activities and influences in a school environment. The rapid growth of applied learning and vocational education and training programs in school (VETiS) in Australia in recent years means that some partnerships have been developed on an individual and ad-hoc basis, creating a new but poorly understood dependence on the quality of collaborations

between educators and partners (Aron 2006; QCA 2008). Furthermore, the research shows that although industry has played an influential role in VET through accreditation, curriculum and other policy mechanisms (Billet and Hayes 2000), industry has less confidence in the capacity of VET delivered in school contexts to prepare students for the workforce (Clarke 2012).

An additional complexity in the case of Australia is created by the federal structure of the Australian education system (separate education systems in each state and territory with three broad sectors of provision: public, Catholic and independent). The federal arrangements provide each state and territory with autonomy in the management of their school systems, allowing for a variety of ways to engage with external partners such as businesses which provide work placements. For example, New South Wales (NSW) represents an example of a highly coordinated and centralised approach to partnerships. What distinguishes NSW from other jurisdictions is its large network of Work Placement Service Providers (brokers) funded by the State and Commonwealth governments. The brokers, which have now been operating for four years, coordinate mandatory work placements for vocational courses offered in the NSW senior school certificate, the Higher School Certificate (HSC). Effectively, this has removed some of the burden from school leaders for finding external partners. In Victoria (VIC) and South Australia (SA) the responsibility for engaging stakeholders and managing partnerships has remained the schools' responsibility. The responsibility for actually finding a placement may vary from school to school, and also depends on the nature of the learning program.

The variety of approaches also creates definitional challenges relating to what 'VET' or 'applied learning' means, since each jurisdiction applies different definitions. For example, in NSW, applied learning does not involve the delivery of VET (these are two separate programs). All VET delivery is restricted to Australian Qualification Framework (AQF) qualifications delivered by Registered Training Organisations (RTOs)[2]. This study uses a broad definition of applied learning and VET in schools, which is inclusive of all vocational programs offered by secondary schools (including VET, Flexible Learning Options (FLO) and School Based Apprenticeships and Traineeships (SBATs)) and which require engagement with external partners.

[2] RTOs in Australia include schools, private training organisations and public training organisations (TAFEs)

The challenge for researchers and practitioners therefore is to understand the ways schools and businesses in Australia engage with each other to best serve the interests of secondary school students undertaking applied and vocational programs. This study aims to bring to light the current state of school-business partnerships in Australian secondary schools from the perspective of school leaders. The research questions being addressed are: In what ways do secondary schools in Australia deal with the growing demand for applied and vocational programs? And in what ways are the schools able to engage with industry and business in the delivery of these programs?

Methodology

This article is based on data collected as part of a broader project which is funded by the Australian Research Council - LP120200272 - *Innovative partnerships for youth engagement in education and work.* The project is a collaboration of two Australian Universities – Melbourne and Deakin – and the state education departments of three states – Victoria, New South Wales and South Australia – and the Catholic Education Commissions of Victoria, New South Wales and South Australia, as well as the Association of Independent Schools in New South Wales and the Victorian Curriculum and Assessment Authority. Across these three states, applied learning programs are located in a wide variety of providers using various approaches, and the project method was intended to increase our understanding of the nature of these applied learning programs and practices in order to maximise school capacity building and leadership, improve the quality of the collaborations and better inform related policy and resource support structures. The research approach employed a combination of qualitative and quantitative methods across the three years of the project.

The questionnaire to school leadership

The component of the study which has furnished the initial data for this article is the school survey conducted in 2014. This survey was designed to investigate school leaders' experiences and perceptions relating to approaches to applied learning, the institutional support for and barriers to these approaches, and the nature of partnership experiences, including the school leaders' views on ways of improving the delivery and management of these programs. The survey targeted all secondary schools which provide applied learning and VET programs (State, Catholic and Independent) across the three states and was conducted online through Survey Monkey. Schools were selected and invited to participate via email contact from the industry partners (state, Catholic and independent school agencies)

which used their contact data bases for this purpose. Of the 1137 number of schools invited to complete the survey, 215 comprehensively completed responses were received from schools, resulting in a 19 percent response rate. The state and sector distribution is provided in Table 1 below.

Table 1 Survey participation by state and school sector

Jurisdiction/Sector	State	Catholic	Independent	Total
Victoria	55	25	10	**90**
New South Wales	36	25	24	**85**
South Australia	30	10	N/A	**40**
Total				**215**

Interviews

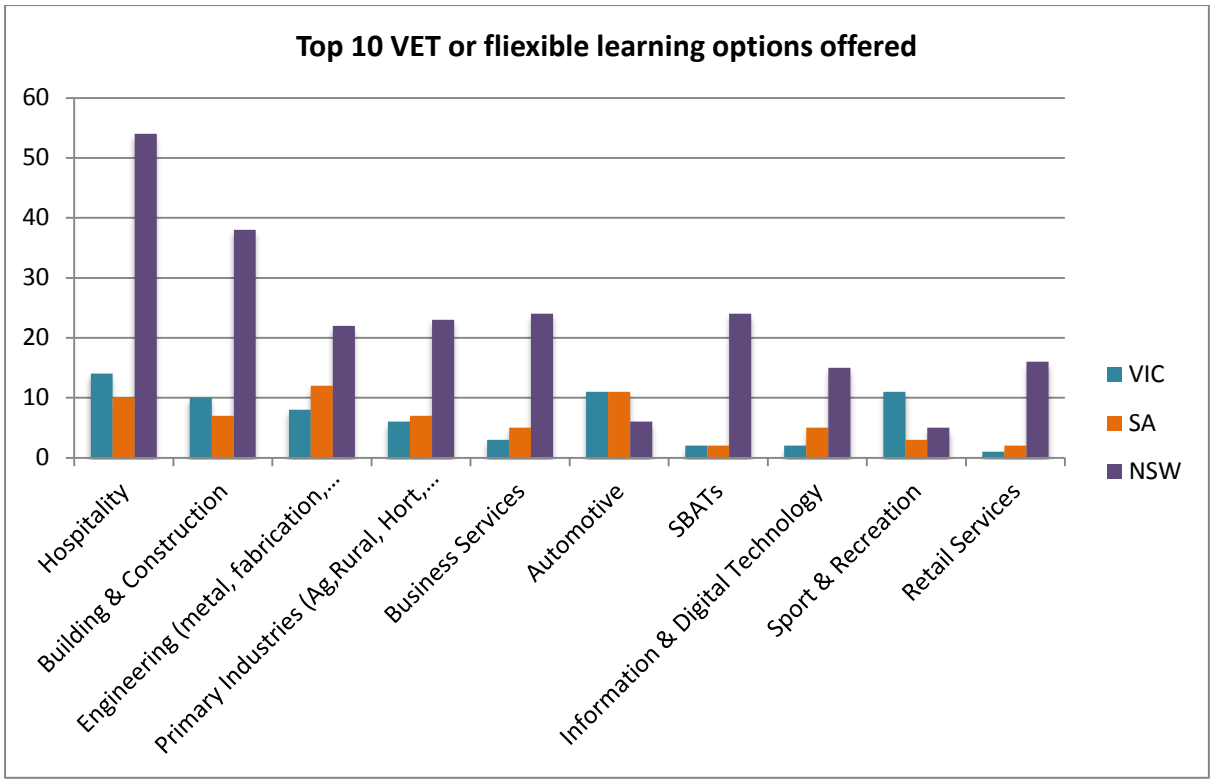
The paper also draws on over twenty in-depth, semi-structured interviews with school principals, teachers and program coordinators, conducted in Victoria and NSW in May 2015. The interview schedule collected data on the background of the school and the type of VET programs offered, the motivation for providing these programs, the resources involved and the perceived challenges to the organisation and management of partnerships relating to VET provision. The interviews typically took between 50 and 60 minutes and were conducted in meeting rooms within the schools. For the purpose of this paper, the interview data utilised was obtained from three schools with a range of diverse approaches to provision of VET and formation of partnerships. Two of the schools are located in regional NSW and belong to Catholic sector. The third school is also located in NSW, but is a metropolitan public school which serves a very disadvantaged community. The location of the three case studies within one state jurisdiction serves to control for the influence of any possible jurisdictional differences.

Findings – survey

The responses from schools indicated that a very broad range of VET and applied learning programs were offered with over 80 different programs named by the respondents including plumbing, public safety, justice or cabinet-making. Figure 1 illustrates the ten most popular courses offered, with Hospitality, Building and Construction and Engineering among the most popular in all three jurisdictions. From the optional qualitative answers (N=205) given

regarding the question on the selection and a number of VET programs offered, many responses were similar in suggesting that their objective was to provide “any VETiS course that students would like to attend at any TAFE” and that their “offer varied from year to year, based on student need or interest”.

Figure 1



To understand the rationale and philosophy of the VET offered in the schools the survey also asked respondents to identify the type of student benefitting the most from these programs. The three types with the highest level of benefit were: (1) students seeking pathways to employment upon leaving school; (2) students seeking training pathways through a TAFE or VET provider upon leaving school; and (3) students seeking an apprenticeship. It is clear from these responses that the school leadership understood that vocational programs are closely linked to employment and post-schooling VET pathway and that providing these students with industry exposure within the VET pathway of their choice should be an important objective. It was important therefore to find out what types and numbers of partner organisations supported the provision of applied learning and VET in these ways. The responses to this item are reported in Table 2 below.

Table 2

(Q14) What types and number of 'partner organisations' support the provision of applied learning/VET/flexible learning options offered by your organisation?

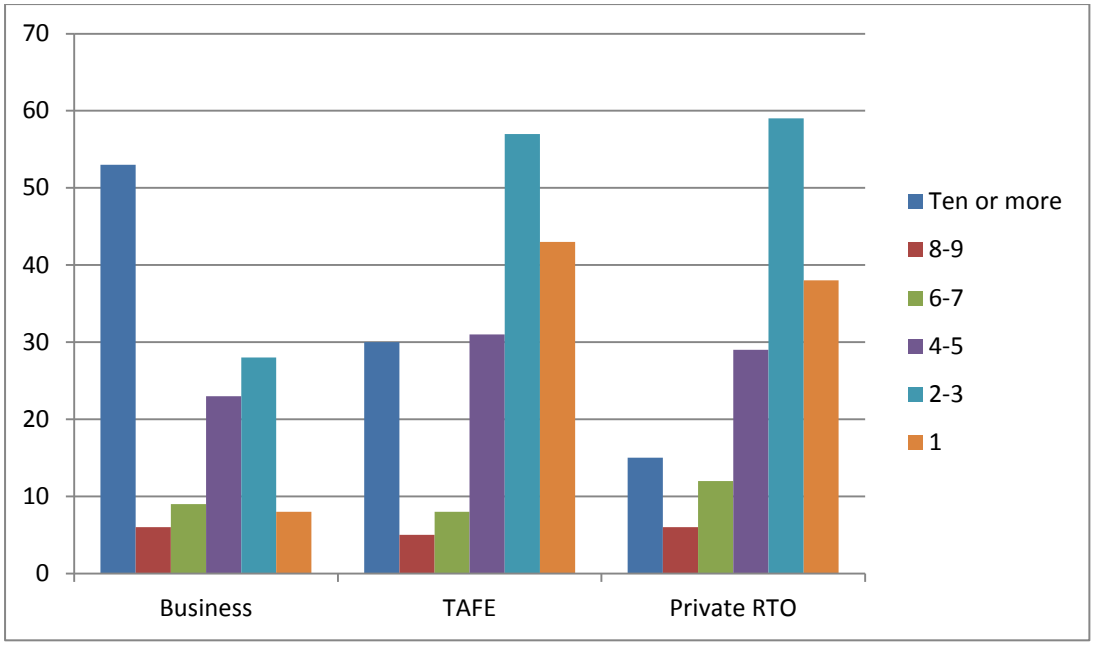
Answer Options	Ten or more	8-9	6-7	4-5	2-3	1
Business	53	6	9	23	28	8
TAFE	30	5	8	31	57	43
Private RTO	15	6	12	29	59	38
Local Community	20	1	12	19	41	30
NGOs	14	1	3	8	30	23
Other schools	17	3	9	28	42	21

The large numbers of responses in every category of partnership make it evident that schools form partnerships with a large variety of organisations, which range from other education and training providers, to community groups, to businesses and associations.

The importance allocated to the category of business partners, however, is evident in the data. Figure 2 shows that partnerships with business comprise the largest category for schools overall, with the largest numbers of respondents reporting that they had ten or more partners of this kind and many more reporting that they had between one and nine partners which were businesses. In fact, other than private and public VET providers, which are heavily involved in the actual delivery of the training itself (including vocational courses and qualifications), business seemed to be the most important type of partner nominated by the schools in the study.

Figure 2

(Q14) What types and number of 'partner organisations' support the provision of applied learning/VET/flexible learning options offered by your organisation? – business and RTO focus.



More importantly, it seems that for regional and rural schools in particular, the partnerships with businesses play a very significant role. This was especially the case in Victoria, with almost 64 per cent of schools in rural Victoria and 50 per cent of schools in regional Victoria claiming to have ten or more such partnerships (see Table 3). A similar trend can be observed in regional NSW where almost 41 per cent of schools reported having ten or more partnerships with business. In South Australia, 50 per cent of regional schools had four or more such partnerships, compared with 20 per cent of schools based in metropolitan Adelaide (see Table 4).

Table 3 a number of partnerships with business in Victoria

Victoria	Ten or more	Up to 9	None	Total
Metropolitan	9	22	17	48
	18.8%	**45.8%**	**35.4%**	**100%**
Regional	8	5	3	16
	50%	**31.2%**	**18.8%**	**100%**
Rural	9	3	2	14
	64.3%	**21.4%**	**14.3%**	**100%**

Table 4 a number of partnerships with business in South Australia

South Australia	Ten or more	Up to 9	None	Total
Metropolitan	3	8	4	15
	20.0%	**53.3%**	**26.7%**	**100.0%**
Regional	1	3	4	8
	12.5%	**37.5%**	**50.0%**	**100.0%**
Rural	0	7	2	9

	0.0%	**77.8%**	**22.2%**	**100.0%**

Schools also reported that the role of business partnerships with local employers or industry is to provide workplace learning opportunities for students. Over 80 per cent of school respondents emphasised that one of the factors in partnering with business was the expectation that this would assist in preparing students for work. Furthermore, the vast majority (97 per cent) of respondents who had established partnerships with local businesses claimed that their schools' relationship with businesses delivering workplace learning was either highly effective or mostly effective, with only 3 per cent saying it was mostly ineffective and none saying that it was highly ineffective.

In terms of the biggest challenges schools faced in effective implementation of partnerships, the majority of respondents indicated limited financial resources and limited human resources as the two highly significant factors.

The survey results confirmed that businesses have a crucial role to play within the range of partnerships which schools form with external organisations. They suggest that businesses are among the most important of partners required by schools and that their role in providing access to workplace learning and work placements is central to this partnership. It is evident that these considerations play an important role in determining the kinds of partnerships which schools seek to form and that, for the most part, these partnerships are viewed positively by the respondents in these schools and are regarded as effective.

However, previous research presents an unclear picture of the effectiveness of vocational and applied learning and of school partnerships. For example, the literature suggests that Australian approaches to applied and flexible learning are diverse and localised by state jurisdictions (Clarke 2013). There are considerable variations in the types of partnerships, the depth of engagement, and the extent to which schools can afford to be active coordinators of such partnerships but these are often characterised by an approach to vocational education and training which tends to be narrow, instrumentalist and task-focused. This approach is also characterised by an "education logic" rather than an "employment logic" (Iannelli and Raffe 2007) not only in terms of the program content but also based on the links between educational institutions and employers and the limited extent to which the students' time is spent in the workplace.

Taking into account the above considerations and the fact that the survey presents a generalised quantitative picture, it was important to follow up the survey findings with an in-depth qualitative analysis to obtain a more nuanced understanding of VET provision and partnerships in schools. The three diverse case studies were selected to represent a range of the current VET and applied learning provision approaches in schools and a range of approaches to involving business as school partners.

School Case Studies

The school-based case studies provided insights from school principals, VET coordinators and teachers into the provision of VET in their school and into existing partnerships supporting workplace learning. The interview questions focused on the motivations and school philosophy for providing VET, the procedures for selecting students and organising work placements, the structures for engaging industry partners, and examples of successful partnerships.

Case study #1: "Technical College"

The school selected for the first case study called here "Technical College" is located in regional NSW and focuses on the provision of vocational training for Year 11 and 12 students. This is a Catholic school which provides School Based Apprenticeships and Traineeships and various VET programs leading to Certificate II or III qualifications.. It has a Trade Training Centre specialising in electro-technology, furniture making, metal and engineering and human services. All students are required to undertake the Workplace Learning Program of 240 hours over two years which involves working one day per week throughout the year and several block releases from school. The school timetable is designed around the work placements, which means that students do not miss any regular classroom subjects.

The rationale for current VET offerings and involvement of industry partners

The school principal interviewed for this study strongly emphasised the uniqueness of his school in Australia. Since 1979, the main focus of the school has been the provision of technical education. The school's success was described by the principal as deriving from its "unique model" and "distinctive spirit and ethos". It can be argued that there are two components of the current delivery model which make this school distinctive. Firstly, it has a

clearly defined purpose - its main objective is to provide students with an employment pathway:

> *"Because the employment now is such an important outcome for young kids and they really worry and it's not like 20 years ago when you'll always get a job.(…) So that's still the biggest outcome for young people (when) walking out the door is full time employment."*

Secondly, the school emphasised the role of a strong partnership with business partners which provide students with valuable on-the-job experience:

> "*We really did build up the network of employers and the relationships with employers and the fact that their training was so geared towards them getting into employment that was just so different to a normal school*."

The sense of local community and engagement with local business partners was indicated as a central element of the school's culture:

> *Locally, it's not policy, it's industry and I think history is probably driving it in our sense, so there's an embedded sense of who we are in the community and what we are as an entity within the parish schools plus an entity within the community.*

A former VET coordinator at the school, and a current Diocesan VET advisor, added that the school has set up a successful model because "*we listened to what the community wants*". So, the school VET offerings not only respond to individual student needs and interests but ensure the provision of courses in occupational fields identified by business as experiencing skills shortages.

It is important to emphasise that employability and employment are seen not seen as narrowly defined goals but rather as means of building meaningful pathways post-school (combining employment and further learning). Moreover the traditional focus on academic subjects and ATAR scores experienced in most secondary schools is seen as limiting young peoples' choices:

> *So in that traditional model in New South Wales, you will sit with a young person and say to that young person, "Okay, decisions often get made by - if I study chemistry it'll get scaled up 'cause it's a tougher course so I'll pick that." So it's not interest-based necessarily, it's not career-based certainly, it's a short term focus on why I'm studying*

this material and it's all aimed towards that end point in November. I finished that and then everyone says, "Good luck" and it's very different. It starts at the beginning for us when you enrol somebody and we say, "Okay, that's what we want you to focus on, it's not about just getting your HSC and let's get that done. That's certainly a bit of valid outcome but it's not our big thing.

Apart from employability, the school principal also emphasised the role of self-esteem and the ability to learn:

"*There is this emphasis now that you have to have ability to learn and change and transfer so continuing the education will provide you in ten or fifteen years. That's the opportunity to actually go back, learn something new, learn new skills on basis of what you actually completed because in a couple of years, you may think oh well I've done this apprenticeship but I don't want to do it anymore"*

Innovation was also mentioned several times when the principal reflected on the importance of teaching basic technical skills like welding, so the students understood that innovation was possible only upon getting the fundamental knowledge and skills. The students were encouraged to build their own 3-D printer from recycled materials, for example, to illustrate how a basic knowledge of materials and metals can lead to innovation.

How are the business partners engaged?

Both the school principal and the former VET coordinator emphasised that the school listened and responded to local industry needs and that this had resulted in strong and long-lasting relationships with local businesses representing various industries. For example, the school commenced delivering a human services aged care course because of industry need.

The town was described as "a retirement town" with many young people: "schools are bursting, so we've got a lot of young people, but we also do have a huge aged care component". The school responded to the industry need first by negotiating accreditation to provide this type of course at school as well as by employing a qualified nurse who worked in hospitals and nursing homes as a teacher.

Apart from a well-developed relationship with the local community, the partnership with business has a very solid foundation through the Industry Board which meets regularly and discusses both the industry's needs and the college's curriculum. The school principal pointed out the importance of such arrangements:

> *"A formal industry board which turned out to be the greatest 'God-send' I think for the College in terms of strengthening the future (…) it's great to have the industry to test that against to get feedback from."*

It seems that having business partners organised in a formal set-up enables greater engagement into curriculum and course development but also provides more industry exposure for young people through meetings, talks and presentations. On the other hand, the industry benefits by having access to a pool of potential employees.

Another example of strong collaboration between the College and local industry was illustrated when both got together to lobby Manufacturing Skills Australia, which is responsible for writing the training package for engineering (nationally endorsed industry competency standards and qualifications) and which limits access to qualifications for school students.

> *"Engineering – we've had a bit of a problem with the training packages, cause to study Certificate II in engineering, you must be employed. So we can do Certificate I ut local industry here wants Certificate II. That's what they want. So we had Manufacturing Skills Australia come in and we got in contact with this whole employer group. (…) so they all turned up and they were speaking so highly of the training, and this is what we want with new employees in our business. And of course, MSA didn't listen."*

This is an example that illustrates the complexity of industry involvement in VET provision. There is a clear tension between the local community and business needs and the influence of the national Skills Councils. On the one hand, the provision of VET is influenced by the growing influence of Skills Councils in the design of its curriculum. On the other hand, it seems that this body may not necessarily act on behalf of all business group interests.

The example of a successful partnership established by the school is dubbed: "a mad scientist experiment". This partnership is the school's answer to the collapsing manufacturing industry in Australia. Its objective was to present the metal engineering industry as innovative, different and interesting. The school was approached by a scientist working, among others, for National Geographic, to collaborate on building an underwater biosphere which would be installed in Darling Harbour in Sydney. As part of the project, students have had to build an underwater robot, a robotic machine that would be operated from the inside of the biosphere

which would be broadcast via ‘Google classroom’ across the world. The process required students to collaborate with Google via videoconferencing, requiring them to learn new skills.

This partnership was perceived as successful because it engaged students with the metal engineering industry; it translated the progression from basic skills knowledge to innovation, and provided students with other important skills such as networking and videoconferencing. Additionally, as a result, the school’s prestige and recognition have also strengthened.

Case study #2: “Senior Secondary”

The school selected for the second case study, “Senior Secondary”, is also located in regional NSW and offers a wide curriculum including HSC, VET courses and School Based Apprenticeships. The school has its own Trade Training Centre specialising in Agriculture. The majority of students who undertake VET are enrolled in a Certificate II in Agriculture or Hospitality. Students are required to commit around 70 hours towards work placements which is usually done as a block release for one or two weeks. During their work placement, students often miss classes as the school timetable is not designed around the work placements.

The rationale for current VET offerings and involvement of industry partners

The school principal explained that the provision of VET in this school remains a significant challenge as the school structures and culture were never intended to support VET provision:

> *“I think that’s one of the biggest challenges that there’s been a lack of recognition of how this impacts on a school structure. But I think there needs to be some more flexibility in terms of how the two co-exist in a school environment. Schools are very structured places, very, very structured and so, you know… I’m talking about all the VET, about how the rigid structure in the school doesn’t really work with it.”*

However the role of VET was also recognised as an important pathway for students who “do not fit into academic programs”:

> *I would have to say, though, that there are a lot of positives that come from VET in schools. So we’re catering to student needs and we’re being student centric in how we deliver our programs and deliver our subjects because it’s about where they want to go and where they see their vision and goal, we’re the facilitators or, you know, the platform for them to do that.”*

In this case, it seems that the school's location in regional NSW and student choice are the main drivers behind the VET offerings, which focuses on agriculture and hospitality. The Certificate II in agriculture has been selected by those interested in staying in the region while hospitality has been popular among students planning to study at university, while working part-time in restaurants or cafes.

The Deputy Principal explained that they were not able to provide all the programs students would like as they had limited human and financial resources:

> *We are a regional school so it is very difficult to get staff who are trained and very expensive to keep staff trained and to maintain that currency. So it's what you've got the resources to offer. In terms of some of the TVET ones [delivered by an external provider], there's a bit more scope for the kids to choose what they're interested in. But then again that's a huge cost as well.*

In this school the availability of vocational programs is based on its capacity to deliver training rather than industry needs and well-grounded career guidance for individual students. Therefore the capacity to engage with industry is limited and motivated mostly by the compulsory provision of 70 hours of work placement.

How are the business partners engaged?

Up until 2015, work placement in NSW was arranged by external brokers funded by the state and federal governments. In the case of "Senior Secondary", with students commuting from several nearby towns, representing different brokering regions, not all the students could be serviced by the local broker. In those cases, the teachers assisted with finding the workplace provider. The VET teachers explained the challenges:

> *"One of the limitations is the number of placements available to provide those work (and) applied learning experiences (…) there's a lot of weariness from employers from taking on countless numbers of weeks"*

> *"We need to negotiate with all the schools in the area because there is a limitation of (numbers of) employers to provide acceptable work placements"*

> *"I think we have built some rapport with some of the places in town (but) that's a limited market. So it is difficult."*

It is clear that this school is struggling to achieve long-term and effective strategies to form partnerships with business. The school's role in organising workplace learning has also been demanding on teachers. The role of a VET teacher extends beyond the school:

> *So normally what happens is that I used to ring up every employer, have a chat with them, speak to them, especially if they were a new employer, screen them in terms of what kinds of activities that they may be looking at with the students. Because what we have found is that especially in terms of hospitality and to some extent with primary industry, there were certain things that they were unaware of. For instance in food and beverage, it's more about front of house and using the coffee machine and we were having students come into an operation that they had to be in a kitchen and they were pulled in front of the house. So these things have been tweaked now by me making sure that I always touch base with every employer.*

The teachers are expected to monitor students' progress so they visit every student during their work placement and fill in appropriate paperwork indicating their learning outcomes. The school's vice-principal suggested that the course requirements developed for school-aged children were too difficult. There was also a perception that employers are not "educated enough" regarding the responsibilities for work placements, with instances, for example, of hospitality employers putting the students "on dishes for the whole time".

5.3 Case study #3: "High School"

The school selected for the third case study has a very specific student population, drawn mainly from public housing: 43 per cent of students come from Pacific Islands, 38 per cent are Aboriginal and 70 per cent are come from a single parent family. Some kids are homeless. The school offers a wide curriculum but enrolment in VET is compulsory.

The rationale for current VET offer and involvement of industry partners

Due to severe socio-economic disadvantage in the area, the VET coordinator emphasised the importance of VET in terms of addressing and minimising the disadvantage the students bring with them:

> *We push towards VET and partnerships to solve the problems of our kids of socio-economic status*.

Providing the students with a variety of skills through close partnerships with training providers and industry is seen as the way of providing the most disadvantaged with opportunities they would not otherwise get:

> *A lot of these kids get exposed to illegal activity. Some live on the street. The school is their only place of security and warmth and nurturing. On the brighter side it gives you a massive potential to do the most marvellous programs with the kids and the community. The potential is enormous.*

The school has introduced an early commencement option so that younger students not normally allowed to enrol in VET (14-15 years of age) can be engaged in the world of work through VET:

> *The earlier you get them understanding the system of work the better for these kids. We have a transition advisor, something that other schools do not have, and we have an engagement officer to make sure that it works for every single kid regardless.*

How are the business partners engaged?

The school has set up cooperation with over 300 partners and organises annual dinners, catered by the students, which bring all the partners together. All of the businesses involved provide work placements, and additionally some of the businesses provide in-kind support. For example, the school bus and a car were funded by two private companies as transport is very limited in the area and many students are not able to travel to TAFE providers for classes. When asked about the expectations of the school regarding the partners, the VET coordinator explained that "providing a secure environment and maintaining values and respect" were the most important elements.

The school relies on its own partner network rather than using the work placements broker funded by the government, which was not perceived as helpful:

> *This government agency is kilometres away from us and it's a huge issue. They just released 90 placements for our kids in Year 10 and 11 in hospitality. More than half of them are 20 km away and a quarter are night times so that's not viable. If the kids do not take up that placement they lose it (they provide one placement for two years per child).*

In this case, it seems that using the school's own network of industry partners was more efficient. The school emphasised that all its partners had been certified as child protection safe.

The school gave several examples of successful partnerships, which provided safe environments and valuable workplace learning opportunities for their students. For example, the school had established a very close relationship with a large international Law and PR company which was a reliable partner in terms of workplace training for apprentices. Two of the students were offered positions in the overseas branches of the company after completion of their studies. A similar example was provided of a construction and engineering company sending its graduates to Hong Kong to continue their apprenticeships.

Discussion and Conclusion

The data reported in this article acknowledge the value placed by schools on applied and vocational education and training. Partnerships with employers play a valuable role in delivering workplace learning, work experience and those elements of the assessment requirements of vocational qualifications which need to be measured in actual workplace environments. The survey's results show a positive picture of these schools' ability to form partnerships with various organisations, with strong emphasis being placed on the importance of cooperation with business. However, it also became evident in the analysis of the qualitative case studies that the formation and maintenance of these partnerships pose challenges for the schools. The analysis also highlights important tensions which arise from the establishment and maintenance of partnerships.

It is evident from the three case studies that a school's rationale for the provision of applied and VET programs strongly influences the way in which industry is involved as a partner. In the case of "Technical College", which was driven by the objectives of delivering "innovation" and "employability", the relationships with industry partners were formalised and focused on long-term partnerships. The local businesses were closely involved in decision-making processes related to the VET offerings, curriculum and student work readiness preparation. The school was supported by local industry in lobbying to increase access to higher qualifications at the school – this is in contrast to the second case study where the leadership felt the qualifications offered were too difficult. To its advantage, "Technical College" could call on a long tradition of delivery of technical programs, which

assisted it to nurture long-term relationships with local businesses and to “specialise” in technical education provision. Additionally, the Catholic Parish supported the school financially, helping it to ensure a well-trained and professional VET teaching workforce and facilities.

The second case study, which illustrated the more typical delivery of VET programs in Australian high schools, with VET as one of many components within the secondary school certificate, reflected the tension between general studies and VET provision within the school. The inability of the leadership to define the place of VET programs within their school, the lack of a clear motivation for offering VET and difficulty in adapting school structures to build effective partnerships, were apparent. VET offerings were predominantly driven by student choice and not in response to local industry needs. The students on work placements missed regular timetabled classes or had to use their holiday time to fulfil placement criteria, which created an environment where VET studies were not seen as core to the curriculum (Polesel and Clarke 2011). This resulted in fragile relationships being built with local businesses.

The third case study illustrated a very specific approach to VET provision at the school level where the VET pathway was perceived as a way of reducing socio-economic disadvantage through engagement. Providing compulsory VET was seen as supporting engagement through applied learning which led to employment outcomes post-school. Reducing socio-economic disadvantage through participating in VET was an important part of the school’s philosophy, ensuring that industry partners had an understanding of the schools’ clientele and provided a safe and respectful environment. While the survey results suggested a mainly positive picture of school-business partnerships, a more nuanced situation on the ground was apparent through the qualitative case studies. In all three cases, a dependence on leadership and informed and committed individuals underpinned successful partnerships. However, the ways in which the secondary schools dealt with the growing demand for applied and VET programs varied from school to school. In part, this was due to differences in the school communities themselves and the socio-economic composition of the student population. This belies the assumption that all schools and their constituent communities are equally well placed to support the transitions of young people, a point noted by Hay (2009). Hay (2009) also noted the impact of differences in infrastructure, industry mix and economic conditions, amongst other factors, on the nature and effectiveness of partnerships. However, the individual schools’ offerings and their ability to engage with external partners and businesses

also depended on the ability of the school leadership to define and communicate the role and place of VET within the school and in the broader community. The success of this depended on the nature of the formal and informal networks in place, on the quality and depth of school leadership and on the knowledge and experience of individuals. As we have noted, this dependence on individuals and leadership is vulnerable to changes in key personnel and the informality of some of the processes and relationships, while a strength in some ways, can lead to problems in monitoring, evaluating and replicating programs. Our study shows that a balance is required between carefully documented processes and the flexibility required to operate programs successfully.

This balance extends to the nature of the partnership itself. For the schools in our study, the challenge was to construct a partnership that did not confine the role of employers to one of simply supplying work placements. Our study showed that businesses were more likely to see the mutual benefits of providing work placements and engaging with students if they were given a greater role in the schools' decision-making regarding the selection and design of vocational studies. The findings of our study suggested that the VET courses which schools select (and whether these are driven by supply or demand factors) influence the prospects of forming successful partnerships with industry. This reflects another tension, that between the perceived needs of the school and its clientele and those of industry. A successful partnership necessarily requires the ceding of some school autonomy – in the decisions as to what programs should be offered and how the partnership and its constituent elements of work placement and timetabling should be organised. This requires both careful organisation and the commitment and understanding of all staff, including those affected by these decisions but not directly involved in the VET programs. As the literature suggests, the benefits of such compromise can be significant (e.g. Lonsdale et al 2011; Lee, Hope and Abdulghani (2015) but there needs to be caution regarding the possible negative impacts of partnerships and networks on school autonomy within a framework of increased monitoring and central control (Mifsud 2016). Our study also suggests that it may be more difficult for schools to engage with service-oriented businesses such as hospitality in long-term relationships, compared with mining or engineering companies, which may see more benefit in investing in the local workforce.

We would also suggest also that the principal flaw in the current Australian model of VET partnerships derives from the 'employment logic' paradigm adopted in Australia, which results in weak linkages between vocational education and training and employers (that is,

outside of the traditional apprenticeship model). Such an approach results in the lower status of VET as a pathway to further education and work and contributes to undermining successful transitions to the labour market. Furthermore, school-industry partnerships, it seems, are highly dependent on the availability and nature of local firms in deciding which courses can be offered by schools and the level of industry engagement which will be afforded to them. This is particularly felt in rural and regional locations, where schools can provide only the workplace learning opportunities which are offered by the available businesses. Such a system is problematic as it may undermine equality of opportunity for certain groups of young people.

Bibliography

Aron, L. (2006) *An Overview of Alternative Education*, Washington: National Centre on Education & the Economy.

Bosch, G., & Charest, J. (2008) Vocational training and the labour market in liberal and coordinated economies, *Industrial Relations Journal*, 39(5), 428-447.

Broadbent, R., & Cacciattolo, M. (2013) The role of school community partnerships in building successful transition pathways for young people: one school's approach, *Australian Educational Researcher*, 40, 109-123.

Business Council of Australia (2003) *The Cost of Dropping Out: the Economic Impact of Early School Leaving*, Business Council of Australia. Accessed 10 August 2015: http://www.bca.com.au/publications/the-cost-of-dropping-out-research-reports

Clarke, K. (2012) *Entry to Vocations: The efficacy of VET in schools*, Adelaide, NCVER.

Clarke, K. (2013) *Entry to vocations: strengthening VET in Schools*, National Centre for Vocational Education Research (NCVER), Leabrook.

Clarke, L., & Winch, C. (2012) *Vocational Education*, Hoboken : Taylor and Francis, 2012.

Clemans, A., Billett, S. & Seddon, T. (2005) "Initiating, Developing and Sustaining Social Partnerships Through Partnership Work". J. Searle, F. Bevan & D. Roebuck (eds), *Vocational Learning: Transitions, Interrelationships, Partnerships and Sustainable Futures. Proceedings of the 13th Annual Conference on Post-compulsory education and training*, Gold Coast, Queensland, pp. 148-55.

Cooper, L., Benton, T. & Sharp, C. (2011) *The impact of creative partnerships on attainment and attendance 2008-2009 and 2009-2010*, National Foundation for Education Research, Slough.

Council of Australian Governments (2009) *National Partnership Agreement on Youth Attainment and Transitions*, Commonwealth of Australia, Canberra.

Davies, M. (2012) 'School Partnerships: Connecting schools, workplaces and communities'. COAG Reform Council's *Good Practice in Youth Transitions National Conference*, 16-17 August 2012 Adelaide, South Australia

DECD (2012) *VET Guidelines for Government Schools*, Leaders' Tool #16: VET and SACE, Adelaide, DECD.

DEECD (2010) *The Statement of Priorities for Partnerships between Business and Victorian Government Schools in Australia*, Melbourne, DEECD. http://www.education.vic.gov.au/Documents/about/programs/partnerships/businessworkingpriorities.pdf

Department for Innovation, Universities & Skills (DIUS) (2008) National Council for Educational Excellence, Nottingham: DCSF. http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownload/NCEE-Recommendations.pdf

Federal Ministry of Education and Research (BMBF) (2013) *International Vocational Training Cooperation: Success in Education Export*, Bonn, BMBF.

Gallie, D. & Paugam, S. (2000) *Welfare Regimes and the Experience of Unemployment in Europe*, Oxford

Hay, S. & Kapitzke, C. (2009) Industry School Partnerships: reconstituting spaces of educational governance, *Globalisation, Societies and Education*, 7 (2), pp. 203-216.

Hay, S. (2009) Transforming Social and Educational Governance: Trade Training Centres and the Transition to Social Investment Politics in Australia, *British Journal of Educational Studies*, 57 (3), pp. 285-304.

Henderson, A. (2011) *Family-School-Community Partnerships 2.0*, Collaborative Strategies to Advance Student Learning: National Education Association.

Hodgkins, A. (2010) Manufacturing (il)literacy in Alberta's classrooms: The case of an oil-dependent state, *Journal for Critical Education Policy Studies*, 8(1), pp. 262-298.

Iannelli,C. & Raffe, D. (2007) Vocational upper-secondary education and the transition from school *European Sociological Review*, 23, pp. 49–63.

Keating, J., Savage, G. & Polesel, J. (2012) Letting schools off the hook? Exploring the role of Australian secondary schools in the COAG Year 12 attainment agenda, *Journal of Education Policy*, 28 (2), pp. 268-286.

Lamb, S., & Rice, S. (2008) *Effective Strategies to Increase School Completion: Report to Victorian Department of Education and Early Childhood Development* Melbourne, Department of Education and Early Childhood Development.

Lee, K., Hope, J. & Abdulghani, F. (2015) Planned approaches to business and school partnerships. Does it make a difference? The business perspective, *Evaluation and Program Planning*, http://dx.doi.org/10.1016/j.evalprogplan.2015.11.002

Lonsdale, M., Deery, A., Clerke, S., Anderson, M., Curtin, E., Knight, P. & Bramich, M. (2011) Final report: the benefits of school–business relationships. http://research.acer.edu.au/policy_analysis_misc/8

Mifsud, D. (2016) The policy discourse of networking and its effect on school autonomy: a Foucauldian interpretation, *Journal of Educational Administration and History*, 48 (1), pp. 89-112.

Murray, P. & Polesel, J. (2013) Pathways and Politics: A Comparative Exploration of Learning Pathways and Transition Systems in Denmark and Australia *European Journal of Education*, 48 (2), pp. 233-246.

Ogawa, Rodney T. & Kim, Ruth H. (2005) The business-education relationship: Using organization theory to conceptualize a research agenda *Journal of Educational Administration*, 43 (1), pp.72 – 85.

Peralta, A. (2015) Corporate-School Partnerships and Neoliberal Influences on Students as Future Participants in the Labor Market, *Brigham Young University Education and Law Journal*, (1), pp.297-321.

Philips KPA (2010). *Unfolding opportunities: a baseline study of school business relationships in Australia*, Department of Education, Employment and Workplace Relations, Canberra.

Pillay, H., Watters, J., Hoff, L. & Flynn, M. (2014) Dimensions of effectiveness and efficiency: a case study on industry-school partnerships, *Journal of Vocational Education and Training*, 66 (4), pp. 537-553.

Pohl, A., & Walther, A. (2007) Activating the disadvantaged. Variations in addressing youth transitions across Europe, *International Journal for Lifelong Education*, 26(5), pp. 533−553.

Polesel, J. (2007) The Development of Vocational Programs in Secondary Schools – Victoria and the European Tradition, Teese, R., Lamb, S., & Duru-Bellat, M (eds) *International Studies in Educational Inequality, Theory & Policy*, Dordrecht Springer, Vol. 3, 151-168.

Polesel, J. & Clarke, K. (2011) The Marginalisation of VET in an Australian Secondary School, *Journal of Vocational Education and Training*, 63 (4) pp. 525-538.

Polesel, J. & Keating, J. (2011) School completion targets and the "equivalence" of VET in the Australian context, *Oxford Review of Education*, 37 (3), pp. 367-382.

Polesel, J. (2008). "Democratising the Curriculum or Training the Children of the Poor: school-based VET in Australia". *Journal of Education Policy*, 23 (6) 615–31

Qualifications and Curriculum Authority (QCA) (2008). *The Diploma and its Pedagogy*, Coventry: University of Warwick.

Raffe, D. (2012) Explaining national differences in education-work transitions: 20 years of research on transition systems. Paper presented at the *European Network on Transitions in Youth: 20th Annual Workshop*, Nijmegen. http://www.socsci.ru.nl/~maartenw/tiy2012/TIY%202012%20Raffe%20paper%20submitted%20version.pdf

Ryan, A. & O'Malley, L. (2016) The role of the boundary spanner in bringing about innovation in cross-sector partnerships, *Scandinavian Journal of Management*, (32), pp.1-9.

Seddon, T., & Billett, S. (2004) Social partnerships in vocational education : building community capacity, Adelaide, NCVER.

Verdier, E. (2009) *European Lifelong Learning Strategy and Diversity of National Devices* Conference Paper, Potsdam.

Watters, J. & Diezmann, C. (2013) Community Partnerships for Fostering Student Interest and Engagement in STEM, *Journal of STEM Education*, 14 (2), pp. 47-56.