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Vocational Education Provider & Business Partnerships: a wicked problem

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Introduction

The importance and benefits of partnering Vocational Education providers with businesses is well documented (Callan, V. & Ashworth, P. 2004), and while success has been achieved in some areas substantial problems remain unsolved both in Australia and internationally. The best ways to identify, form and maintain partnerships have not yet been established and it is unclear what role technology should play in these processes.

These are examples of ‘wicked’ problems – a term coined by Rittel and Webber (1973) to describe problems with specific characteristics. Problems are ‘wicked’ (as opposed to ‘tame’) when they are difficult to define and when it can’t be determined whether they have been solved as “there are no solutions in the sense of definitive and objective answers” (Rittel & Webber, 1973). These problems are complex, there are neither quick fixes nor any simple solutions; they cannot be dealt with in the same manner as tame problems.

With the aim of making some progress on these issues I undertook a five week study tour of Californian Community Colleges to identify and document best practice. This paper discusses the results of this research and puts forward strategies for solving the ‘wicked problem’ and improving Vocational Education provider and business partnerships.

Research method

A literature survey was completed prior to the commencement of the study tour encompassing research relevant to Vocational Education and business partnerships within Australia and the United States.

Meetings were organised with individuals working in the Vocational Education sector in Australia and the United States (US) with priority placed on those with ties to partnership management activities in TAFE NSW and US Community Colleges. Interviews were conducted throughout October and November 2012. Individual meeting notes can be accessed on my [blog](http://vetpartnerships.blogspot.com.au/)**.**

Vocational Education Provider & Business Partnerships in California

Vocational Education in California, typically referred to as Career and Technical Education (CTE), is a critical, complicated and messy beast. It is delivered at secondary, postsecondary and adult education levels. High school Vocational Education includes Science education, general labour market preparation, and occupational education (NCES p1). At the postsecondary and adult education levels, Vocational Education is linked to preparation and upgrading of skills for employment in specific occupations or careers.

California has 536 institutions offering vocational education (NCES p79). The Californian Community College Sector is mostly comprised of 2-year colleges operating in the public sector. It is the largest system of higher education in the United States with 2.6 million students attending 112 colleges. Each college is managed independently with leadership, advocacy and support provided by the California Community Colleges Chancellor’s Office.

The ‘wicked’ nature of problems concerning education reform is amplified in complex and highly distributed environments such as the Californian Community College sector. “These entangled problems are made even more complex because they are values-laden. It is impossible for everyone to reach consensus about how they should be addressed. There is no right or wrong answer, and each attempted solution will give rise to other anticipated, unanticipated, and delayed wicked problems” (McMahon 2011, p1).

When considering the problem of determining best practices for successfully forming and managing business partnerships, the fragmented nature of the Californian Community College sector is both a blessing and a curse. A fragmented organisational structure offers vast opportunities for innovation which is essential for solving this type of problem. However, such a structure also introduces challenges for other prerequisites to success such as managing collaboration and enabling wider scale implementations of solutions.

One result of the situation observed in California is the vast number of initiatives, some complementing and others competing to solve a problem. Based on each stakeholder’s point of view as to how a problem should be defined, that stakeholder has responded in the manner seen as most appropriate. This has resulted in the creation of projects, roles, committees, systems, processes, resources, programs, departments and entire organisations. In something resembling a free market or evolutionary system, initiatives that ‘work’ have survived; either because they truly work towards solving a problem and are recognised for doing so, or because they are perceived to work by whoever is funding that initiative.

Some initiatives observed are driven from the top down, such as programs implemented by the Californian Community Colleges Chancellor’s Office, others are implemented by colleges, departments or individuals in a bottom up manner. Further initiatives have been implemented in a horizontal manner often with stakeholders outside of the Community College sector taking a lead. Below is a summary of the relevant initiatives discovered through my research (Figure 1). For a more detailed description of each initiative please see the website listed against each entry.

**Top Down Initiatives**

*Doing What Matters* – [Doing what matters](http://doingwhatmatters.cccco.edu/) is a framework implemented by the Californian Community Colleges Chancellor’s Office aimed at restructuring Community College offerings around priority skills areas. “Colleges can take a regional approach to identify labor market trends, evaluate how each collegiate region is responsive to market demands, and decide which programs matter most to jobs and the economy as well as how and where they will be delivered”. In addition to giving priority to programs that most benefit the jobs and the economy Doing What Matters aims to retool or suspend programs that aren’t matched to industry requirements.

*Centers for Applied Competitive Technologies (CACT)* - [Centers for Applied Competitive Technologies](http://www.makingitincalifornia.com) is a community college based program with the goal of partnering with technology and manufacturing companies to solve operational, personnel and technical problems. There are 12 CACTs in California each offering technology education, manufacturing training, and consulting services that aim to enable improvements in workforce development, technology deployment and business development.

Vocational Education Partnership Initiatives in California



Figure 1 – Venn diagram showing Vocational Education partnership initiatives studied in California

*Centers of Excellence* – [Centers of Excellence](http://www.coeccc.net/) aim to partner with business and industry in order to deliver regional workforce research customised for community college decision making and resource development. The outputs of this program include environmental scans, customised reports and industry collaboration events where community colleges, businesses and workforce development organisations can meet to share environmental scan findings to jointly discuss and develop solutions.

*Business & Entrepreneurship Center Program* - the Business & Entrepreneurship Center (BEC) Program is tasked with supporting both Community Colleges & Business and Entrepreneurship Centers (similar to Australian Business Enterprise Centres but part of the Community College system). The BEC program aims to 1) encourage young people to engage in entrepreneurship as a career path 2) increase the success of business through partnership and collaborations with industry, education and government and 3) expand entrepreneurship curriculum across community college campuses.

*Workplace Learning Resource Centers* – Workplace Learning Resource Centers aim to meet the training needs of businesses throughout California using regional centers that provide high-quality and affordable training programs on critical business topics such as basic workplace skills, teamwork, leadership and management, customer service, generational & cultural diversity, creativity and critical thinking, English as a second language, maths and business.

**Horizontal Initiatives**

*Career Ladders Project* – [The Career Ladders Project](https://www.careerladdersproject.org/) works in partnership with California Community Colleges to provide educational and career advancement opportunities. These opportunities are brought about through research, policy initiatives and the provision of strategic assistance to colleges and their workforce development partners.

*California Corporate College* – [California Corporate College](https://upskillcalifornia.com/) works in partnership with Californian Community Colleges and aims to bring high quality, market relevant corporate training and workforce preparation services to employers with needs that reach beyond their local community. Serving as a single point of contact for companies with multiple locations across California, they add value by reducing logistical challenges and ensuring consistency of service delivery and quality.

*Doing What Works* – Sponsored by the U.S. Department of Education, the Doing What Works website translates effective research based education practices into practical tools that enable effective implementation in classrooms. “More than just a conceptual guide, this website takes recommendations from the U.S. Department of Education's Institute of Education Sciences (IES) and translates them into tools and multimedia presentations that can be used to improve the quality of education”.

*Mid Pacific ICT Center* – [MPICT’s](http://mpictcenter.blogspot.com/) mission is to coordinate, promote and improve the quality of ICT education, with an emphasis on 2-year colleges, in a region consisting of California, Nevada, Hawaii and the Pacific Territories. Included within MPICT is the Californian Community College ICT Collaborative which was formed to advance ICT education programs at California community colleges and enable a diverse student population to succeed in meeting industry and business ICT workforce needs.

**Bottom Up Initiatives**

The following initiatives don’t have individual websites as they are implemented across multiple colleges in various ways. Where appropriate a link to an example implementation has been provided.

*Regional Consortia Projects* - Regional Consortia (such as the Bay Area Community College
Consortium (BACCC) provide the framework needed to allow coordination of regional programs and increase collaboration between colleges and employers with a focus on regional priorities. BACCC have demonstrated success in partnering with industry through the use of a ‘marketplace’ model developed specifically to allow stakeholders with different needs to meet and develop a shared vision. Regional Consortia also serve as a link between colleges Career Technical Education programs, Economic and Workforce Development Initiatives, and the Chancellor's Office. The projects run by Regional Consortia allow businesses to deal with Colleges at the scale that is needed for the implementation of larger than local level projects.

*Local and Regional Workforce Development Partnerships* – Various Community Colleges and College Regions have successfully created workforce development partnerships with large employers and industry sectors. While individual Colleges often take a leading role in the formation of these partnerships, many have been initialised through top-down initiatives where employers have made contact with the Community College Chancellors office or a Regional Consortia. An excellent example is the [Bay Area Consortium of Water & Wastewater Education](https://bacwa.org/education/bacwwe/).

*Local Sponsorship Partnerships* – A large number of Community Colleges have sought and successfully established sponsorship partnerships with a wide range of partners. Donations of curriculum, time, product, cash and other resources were common however require Colleges to invest the time and resources needed to find willing partners.

*Advisory Committees* – Californian Community Colleges are required by law to involve Advisory Committees in the planning of all classes. Many departments make the most of this opportunity to develop meaningful partnerships with the people on their committees. Success in these partnerships is often linked to the ability of academic staff to build relationships and middle management (Deans of Schools) taking a lead in the development of committees through the development of formal guidelines for other staff. If staff lacks the skills, knowledge, tools or support needed then committees are underutilised and the true value of these partnerships is not realised.

*Alumni Management* – the importance of Alumni Management is widely accepted and the benefit of maintaining close ties with alumni clearly includes improved relationship management with businesses. However, in the Californian Community College sector, there are rarely sufficient resources for this task to be given priority. Where Alumni are ‘managed’ it is typically by faculty without any time specifically allocated for the task. The use of Linkedin and Facebook seems to be one answer to this problem with preference being given to the former.

The Role of Technology

No clear link between the use of technology and success in Vocational Education providers partnering with business was observed. While some initiatives relied on technologies such as email, databases and social media these were all being utilised in a standard manner.

*“New technologies when used strategically can be an important tool to assist in working across organisational boundaries… poorly handled, however, technology can exacerbate wicked problems” (APSC p 21). It is apparent that success isn’t delivered through technology itself, rather through well designed processes that sometimes make use of technology.*

*For example, initiatives studied that were succeeding in maintaining close relationships with businesses all had a successful method for maintaining contact information and relationship history. In some cases (usually when the job was left to an individual) this was through the use of a diary or appointment book. In larger scale cases the successful use of Customer Relationship Management (CRM) software and/or mailing list management software was frequently observed.*

Mid Pacific ICT Center (which is made up of ICT professionals) make excellent use of an electronic mailing list and blog for keeping in contact with stakeholders and partners. However, it must be noted that it is not the technology that solves this problem; it is simply the chosen tool. The same outcome could be achieved (although at greater cost) with a paper based mailing list.

Recommendations

“Tackling wicked problems is an evolving art. They require thinking that is capable of grasping the big picture, including the interrelationships among the full range of causal factors underlying them. They often require broader, more collaborative and innovative approaches” (Australian Public Service Commission (APSC), 2007).

For TAFE NSW to achieve improvements in forming and managing effective partnerships with businesses there are a number of specific challenges. There are 4 broad areas identified where current practice can be strengthened and improvements made:

* 1. Reaching consensus on what is ‘success’ in forming and managing Vocational Education and business partnerships is and how this success can be measured
	2. Developing the skills to solve this problem
	3. Identifying, evaluating and implementing best practices to improve Vocational Education and businesses partnerships
	4. Developing and supporting an organisational culture of innovation and collaboration

**Reaching consensus on what is ‘success’ in forming and managing Vocational Education and business partnerships is and how this success can be measured**

Effectively engaging all stakeholders will be critical to clearly and accurately defining the problem of managing Vocational Education and business partnerships. “A lack of understanding of the problem can result in different stakeholders being certain that their version of the problem is correct. It can be extremely difficult to make any headway on an acceptable solution to the wicked problem if stakeholders cannot agree on what the problem is”.

What is considered ‘success’ in facing this problem will also need to be defined. Performance measurements need to be agreed upon in order to effectively evaluate, control, budget, motivate, promote, celebrate, learn and improve initiatives designed to contribute to this success (Behn, R. 2003).

An example of meeting this challenge is through the ‘Marketplace’ consultation model developed by the Bay Area Community College Consortium. Under this model, as many stakeholders as possible first meet for an exploratory conversation with a ‘round robin’ (hear from everyone) discussion. Next steps (if any) are documented. The aim of the marketplace model - as in a real world marketplace, is to enable a situation where “everyone leaves with something slightly different, but somehow needs get met”.

**Developing the skills required to solve this problem**

Solving ‘wicked’ problems “requires additional skills over and above the more traditional analytical, conceptual, and project management skills required by public servants involved in policy making and planning policy implementation” (APSC p 33). To solve the problem of forming and managing Vocational Education and business partnerships TAFE NSW needs to broaden the skill sets of their workforce and increase their capacity to “facilitate cooperation and partnerships, build commitment to a shared agenda, manage and share information, manage change, engage stakeholders, and resolve conflict” (Management Advisory Committee, 2004, p 53).

All initiatives studied had greater success when the people responsible for forming and managing partnerships were not only motivated, but enabled with the necessary skills and tools to complete the task. With the exception of rare individuals and faculties with relevant academic fields (e.g. marketing), success in forming and maintaining business partnerships was most often achieved by business development professionals, not academics. If teachers are to be responsible for solving this problem they will require additional skills and support.

TAFE NSW is fortunate to have large numbers of motivated, highly skilled and intelligent individuals at our disposal; however, in many cases their current skill set is not matched to the task of solving the problem of improving business partnerships. We need to rectify this before lasting successful improvements can be attained, either by training our existing workforce or hiring more individuals with the necessary skills.

**Identifying, evaluating and implementing best practices to improve Vocational Education and businesses**

Meaningful improvements in forming and managing effective Vocational Education partnerships with businesses will require a process to recognise what works and determine where and how it should be replicated. Pockets of excellence exist throughout TAFE NSW and answers to successfully partnering with businesses can be found within many departments. What is lacking is the ability to recognise and duplicate their success.

A project should be initiated as soon as possible to create a process that enables the identification, evaluation and documentation of best practice both within and outside of TAFE NSW. The output of this process could be toolkits that describe and enable implementation of best practices within individual TAFE NSW Institutes, departments and teaching sections that choose to use them.

A successful initiative that should be considered for study and adaptation for this purpose is [WestEd’s Doing What Works](http://www.wested.org/cs/we/view/pj/493) program. Although this initiative is focused on improving quality of teaching, the methods used for achieving this goal are not topic specific.

These steps will lead to significant improvements and once achieved the other initiatives identified in this study should be assessed for suitability. The adoption of formal Advisory Committees, Centers of Excellence, Regional Consortia Projects and the Business & Entrepreneurship Program should be some of the first initiatives put through this process to assess their suitability for adoption/adaptation.

**Developing and supporting an organisational culture of innovation and collaboration**

A comprehensive statewide strategy, with clear support from management, needs to make it clear that improving Vocational Education and businesses partnerships is a key priority for TAFE NSW and that to achieve this the organisation must innovate and collaborate. “Holistic, not partial or linear thinking” (APSC p11) must be encouraged throughout the organisation. Innovative, flexible approaches to problem solving must be encouraged through policies that tolerate uncertainty and accept the need for a long-term focus.

Line managers throughout TAFE NSW must be encouraged to adopt “a style that encourages initiative but recognises the need for learning… characterised by a willingness to think and work in new and innovative ways (e.g. using trials, prototypes or multiple iterations)” (APSC p38).

Conclusion

*Improving the formation and management of effective Vocational Education and business partnerships is a ‘wicked’ problem. Accepting this and using strategies proven to succeed in solving these types of problems is the most likely path to success.*

Specifically, TAFE NSW needs to reach a consensus as to the nature of the problem, develop the capacity to face the problem and create a process to identify and disseminate best practice solutions. For lasting and pervasive success in forming and managing successful partnerships with businesses TAFE NSW must also foster a culture that is supportive of innovation and collaboration throughout the entire organisation.

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