

Where is 'Place' in VET?

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Abstract:

In this keynote presentation I will ask how has 'place' been conceptualised in the vocational education and training sector in order to achieve community and regional development. What philosophies have informed the theoretical and practical bases of this work? And what are the consequences for preparing workers to work in a global context of climate change and environmental crisis? I will propose that place is the unmarked category, the 'context' or background of our work. If we think through place as a constitutive category, as active rather than passive, we would see the world and our work in VET quite differently. I will explore these questions through empirical work about water in the Murray Darling Basin and about how we learn place and form community Gippsland, Victoria.

Introduction: Place matters

I acknowledge the traditional owners, past and present, of this land where we are gathered.

Where I live now and how do I come to ask these questions about place?

I recently took up a position at Monash University's Gippsland campus in Latrobe Valley, Victoria. I moved there from Armidale on the northern tablelands of NSW, high up on the Great Dividing Range between the wild gorge country of the coastal hinterland and the drylands of the western plains. For those of you who watch ABC television news in Australia you are probably more familiar with Latrobe Valley than you imagine. Beaming into our homes, at times daily on the national news, we see images of the puffing chimneys of one or more of the Latrobe Valley power stations, as we contemplate the fate of the planet under the effects of climate change.

Before I moved to Latrobe Valley a colleague located Morwell on Google earth for me. Beside the usual rows of suburban rooves there was a huge, uneven, bright red shape. The open cut coal mine, normally hidden from public view, appeared like a giant ulcerous sore in satellite images of the earth's surface. I visited the district to find some accommodation. Driving the few kilometres off the Princes Highway from Morwell to Churchill massive power lines criss cross the landscape in every direction. Electricity transformers buzz as they transfer electricity from power station to power lines. The chimneys of the power stations pour out 'water vapour' that billows into man-made clouds across the sky. Latrobe Valley provides 85% of Melbourne's electricity; it is Melbourne's abject. This is my new home.

For a long time I have been involved in researching place, especially Indigenous attachments to place in northern NSW, but also questions of non-Indigenous belonging in this land. The questions changed, however, and developed a new meaning when I moved

to Latrobe Valley. Place matters. Questions about climate change, water, and eco-social sustainability have emerged as some of the big questions facing global populations today. The response to these problems has largely been framed in terms of the techno-scientific solutions of modernity – moving water, building more dams, de-salination plants - combined with a neoliberal economic approach - water trading, carbon trading, and economic sanctions. I began to frame my research questions in terms of asking what might be an adequate educational response?

Two current research projects have moved me to think about these issues in relation to education and educational research. The first is about water in the drylands of the Murray-Darling Basin¹. The second is about how we teach and learn about place and community across the curriculum, from early childhood to school and adult and community education. In the first project I am mainly working with Indigenous partner researcher/artists and their representations of water places, beginning with the Ramsar listed Narran Lakes in western NSW. The project is travelling from the Narran Lakes down the Darling and into the Murray, researching Indigenous storylines of water and how they are connected across the different language groups. The project was conceived in response to drought and the increasing lack of environmental flows that have starved the Narran Lake of life. The drought has intensified and the Murray-Darling Basin, as a global imaginary, has become visible on the nation's agenda. It has also been strongly linked to the issue of climate change. I am interested in what sort of pedagogies and sites of learning can change the way we think about water and water places.

The second project was designed to be located in three sites where universities had a brief to engage with their local communities and places – Logan in Brisbane, Western Sydney, and Armidale². The aim was to examine 'pedagogies of place' (Somerville, 2008) in early childhood, school, and adult/community education, respectively, in these sites. My focus is on the adult and community education sector. When I took up my current position I re-located this aspect of the project to Gippsland. I mapped my own place learning, identifying key organisations and individuals including local and regional art galleries, tourist information centres, neighbourhood houses, national parks, landcare organisations, and power stations. We³ then interviewed people from these, and other providers of adult and community education, to find out how learning place and community happens in these organisations. While issues of climate change have emerged in this study the project itself has a deeper underpinning in theorising place learning outside discourses of crisis. This allows us to consider the contribution educational researchers might make to teaching and learning about place and community in a global world.

Why 'place'?

¹ Somerville, M. 2006-2008, Bubbles on the Surface: a place pedagogy of the Narran Lakes. (DP)

² Somerville, M. Davies, B. Power, K. & Gannon, S. 2006-2008, Enabling place pedagogies in rural and urban Australia (DP)

³ Dr Phoenix de Carteret, a Research Fellow employed on these projects has conducted interviews and assisted in the analysis for this paper.

My ideas about place as a constitutive force derive from my work with Indigenous people where I learned to think through place (Somerville, 1990; 2008). For me place matters as a geographical location, the physical terrain of our being; place matters as a concept in research and theory; and place matters as a practice. Place has been noted as an under-theorised concept in educational research generally (Gulson and Symes, 2007) and in the field of vocational education and training in particular, 'Place theory in our view has an enormous and as yet untapped potential to further our understanding and improvement of VET practices' (Falk and Balatti, 2008, 1). Place as a concept enables conversations across disciplines, between Indigenous and non-Indigenous world views, and links the local and the global. We can all relate to place and unlike 'environment' it is not attached to a particular discipline or research paradigm. We all have places we are attached to, places that we care about. Take a moment to think about your favourite place. Place is a very physical concept, a very specific geographical location. We are attached to places of our earliest memories. Recall, for example, your earliest memory of a water place. Is it a place where you played or swam? A beach, a storm water drain, or a puddle, a public or a lurky place?

In a review of 'place' in sociology, Gieryn (2000, 471) notes that 'Places are endlessly made ... when ordinary people extract from continuous and abstract space a bounded, identified, meaningful, named and significant place'. We make the places of our work, our work makes the places of our communities, and our communities make the places of our world. Place, Gieryn (2000, 471) says, is thus remarkable because it is 'an unwindable spiral of material form and interpretative understandings or experiences'. According to Gruenewald, places also make us: 'As occupants of particular places with particular attributes, our identity and our possibilities are shaped' (Gruenewald, 2003: 621). Gruenewald believes that dominant storylines of place 'deny our connection to earthly phenomena, ... [and] construct places as objects or sites on a map to be economically exploited' and that we need to become 'conscious of ourselves as place makers and participants in the sociopolitical process of place making' (Gruenewald, 2003, 627). Changing our relationship to places means changing the stories we tell about places.

Where is place in VET?

The NCVET website is an excellent database for accessing, and indeed for assessing, the research literature produced by the National Council for Vocational Education Research. I used the thematic search link to do a quick computation about where the concept of 'place' might be found. There were five thematic areas listed on the site with the following approximate number of studies listed in each thematic area:

Students and individuals	570
Teaching and learning	200
Industry and employers	175
VET system	300

VET in Context	195
Total	1440

I selected 'VET in Context', the theme of this conference, as the one that would most likely include considerations of place. This category was then broken down into sub-themes as follows:

General	6
Lifelong learning	16
Cross sectoral issues	23
International issues	40
Context to innovation	12
Economic	21
Work changes	33
Social issues	26
Regional issues	17
Environmental issues	1

At a rough estimate the one study listed under 'environmental issues' is the only one that closely approximates my concerns with place, ie, 1 study of 1440, or approximately .07% of the studies funded by the National Council for Vocational Education Research were concerned with 'Environmental issues'. I also decided to check the studies under the theme 'regional issues'. The majority of these studies (12 out of 17) were concerned with partnerships of various sorts in rural and regional areas and how these might contribute to the VET agenda for regional growth and development. Only one of the remaining studies focuses on place: 'Exploring locality: The impact of context on Indigenous vocational education and training aspirations and outcomes'. This study used place via postcode as location to analyse access and participation of Indigenous people in vocational education and training. Place, as physical location, was portrayed as an impediment to achieving VET outcomes, not as an intention of the study itself, but as an affect of using the lens of VET, combined with location, to understand Indigenous participation. Where relationship to land is mentioned: 'Considerations such as family and community responsibilities, and connection to the land, prevent regional and remote learners from re-locating to urban areas in order to greater access employment opportunities' (Stehlik and Gelade, 2004,7), place attachment was further portrayed as an impediment.

The other example 'Learning to manage change: Developing regional communities for a local-global millennium' is an edited collection of 24 chapters (Falk, 2001). It is not possible to provide a detailed analysis of this book here, however, it is important to analyse the dominant storylines of place. Region as place is again noted as a global problem, but 'the problem' is to some extent critiqued: 'Regional communities are portrayed as being stuck in a downward spiral of declining commodity prices, public services, commercial facilities, and political influence' (Falk, 2001, 3). In the introductory chapter it is noted that place and identity count, that metrocentrism and its concomitant urban drift can be challenged by 'local identities of people and places which

stand in their own right' (7) and that it is important to take account of external processes 'while celebrating local place, history, and identity' (11). 'Local place, history and identity', however, is largely absent, with an account of local places only appearing in a chapter about the significance of sacred spaces.

This brief summary overview of NCVET literature through the lens of storylines of place tells us that 'regions' and Indigenous people are located, and for both their location is a problem, geographically, cultural and socially, individually and collectively.

In the one paper listed under the 'Environmental issues' thematic, 'Finding the common ground: Is there a place for sustainability education in VET?' Goldney et al (2007) examine the relationship between 'environmental sustainability education' and VET. It is interesting to note that the 'environment' has already slipped from the title of the report, revealing the risk of these terms whose overuse has tended towards a clichéd meaning of everything and nothing. They do however, draw on a 1987 United Nations definition of environmentally sustainable development that is close to an understanding of place: 'the environment is where we live; and development is what we all do in attempting to improve our lot within that abode. The two are inseparable' (World Commission on Environment and Development, 1987 in Goldney et al, 2007, 13). Sustainability is seen as ensuring that future generations can meet their needs and acknowledges the limits 'of the biosphere to absorb the effects of human activities' (13). In 2008, after the Stern Review (2007), it is commonly regarded by governments that the biosphere has already surpassed its limits and both parties in Australian federal politics accept that action to reduce emissions on a global scale is now urgent. Beyond the crisis discourse of climate change, How might we educate a generation of children and adults who inhabit a global cyber world to be attached to their local places, to inhabit, and to know place differently? How can VET respond?

Goldney et al (2007, 7) make the following recommendations:

- The vocational education and training sector (VET) has a key role to play in promoting sustainability education and training.
- Training packages are a practical means of integrating sustainability into vocational education.
- VET practitioners already use teaching practices that are appropriate for sustainability skills including action learning, group learning and problem solving.
- Learners can develop the ability to promote these in the workplace, devise and encourage sustainable work practices, and develop strategies for negotiating and justifying desirable changes with colleagues and managers.

They add, however, that 'the ability of the VET sector to accommodate this need will be limited by ... existing VET culture, delivery systems and training packages (Goldney et al, 2007, 9). So, what are the existing VET culture, delivery systems and training packages, and in what ways are they an impediment to introducing education for environmental sustainability? I believe that VET in Australia has the following characteristics that are an impediment to education for environmental sustainability:

- VET in Australia is currently conceived as narrowly skills based with a focus on paid employment and narrowly conceived economic outcomes
- Philosophically VET in Australia is underpinned by behaviourism and influenced by neoliberal economic and techno-scientific approaches
- Pedagogically VET is wed to behaviourist pedagogies and ongoing attempts to ameliorate this within this paradigm will not alter the approach to teaching and learning
- VET is the preferred model for all adult and community education so it has colonised the ACE sector through the application of funding models
- VET as it is currently practiced in Australia is past looking rather than futuristic, concerned with occupations and tasks that are already classified and organised around performance based assessment

According to Goldney et al (2007, 9), 'if vocational education and training is to remain relevant in the changing workplace and community in general', a new paradigm is required. I am interested in exploring what that new paradigm might be.

Place pedagogies in rural and urban Australia

The research study, 'Enabling place pedagogies in rural and urban Australia', is informed by a framework developed from my years of learning place and community with Indigenous people. In summary, the 'Place pedagogies' framework has three essential elements or principles (Somerville, 2008): 'our relationship to place is constituted in stories and other representations; place learning is local and embodied; and deep place learning occurs in a contact zone of contestation'. Rather than elaborate on these principles here, I will explore them through the case study of the Morwell River Wetlands described below.

The findings of our study of learning place and community suggest that place learning is almost entirely absent from the formal sector of adult and vocational education, as was indicated in the literature review. While the ACE sector in Victoria is an important potential site for local place learning, it is contextually responsive (see Sanguinetti's concept of pLACE⁴) rather than place focussed. Neighbourhood Houses, in particular, provide a home and sense of belonging for learners who for various reasons have been disadvantaged by formal learning systems. For these learners, the Neighbourhood House is the first step in engaging with education and it is critical that such places of learning are locally responsive. Imagine Bendoc, for example. Located in the most remote corner of Gippsland near the source of the Murray River and three hours from the nearest large

⁴ In Sanguinetti et al 2004

town, they regard their Neighbourhood house as their bus which provides access to everyday (learning) activities that we take for granted – shopping, movies, and networking with other communities. The most important work of their centre is community building, evident for example in their activity to restore the village church, building at the same time a sense of shared community and history. The bus and the church activity were self funded and their VET courses are run to try to support these other activities that are not valued or provided for under current funding regimes.

Conflict between ACE and VET frameworks produced by current funding models that favour narrow employment outcomes are common across the whole of the ACE system in Victoria. These conflicts undermine and threaten the very work that the ACE system can do in terms of accessing the most disadvantaged and providing a pathway into VET. The irony for example in Latrobe Valley is that there is a huge pool of unemployed people who have now experienced intergenerational poverty and disadvantage since the privatisation and automation of the power industry in the 1980s. At the same time there is a massive skills shortage to the extent that proposed regional development activities are rejected by the Department of Regional Development because of the inability of the region to provide skilled labour (Carseldine, 2008⁵). The Churchill, Moe and Traralgon Neighbourhood Houses all report a constant struggle for funding and balancing their access activities and those that build important community social capital with VET funding outcomes.

An example of how the nature of community building and locally responsive pedagogies can support an enabling place pedagogies is de Carteret's project about identity and place in Gippsland.

The most extensive place learning, however, is happening in the community sector from providers who are not specifically intended to provide adult education. These include landcare organizations, catchment management authorities, art galleries, tourist information centres and national parks. The kinds of pedagogies employed in these organizations are innovative, often emergent, and interlinked in exciting ways through networks of exchange. While I could go into detail of each of these organizations and what place pedagogies are employed in their work, I will describe one example of an integrated program. In the following example of the Morwell River Wetlands program I will tease out the various involvements of some of these providers and how we can imagine such an integrated program working from the point of view of vocational education.

Morwell River Wetlands

I became interested in the Morwell River Wetlands program through my own place learning and through visiting our teacher education students on prac placement. I connected to the placeness of the wetlands through my own earliest memories of water places:

⁵ personal communication

Walking out of the scrub at the edge of the playing field there's a big puddle of water lying since recent rains. My heart rises the first time I see this water appear after drought. The second time there is already an amazing chorus of frogs. My son tells me they sing in chorus so the females can choose a mate. But where do they come from? There have been no frogs singing since that first day at dawn. Why aren't they singing? Is it the time, or are they all gone again? It's Sunday morning so I wander over to the little wetland. I think about knowing a place day in and day out, over seasons and years to really know what is going on, I think about how places teach us. I crouch down beside the water in the pose of the child, crouching down beside this place just to see what I can see. I smell the rank smell of childhood water holes filled with water after rain. Peering in to the shallow pool I enter a still, tea coloured world of decaying leaves and grass, tiny creatures minutely disturbing with their movements. But there are no tadpoles at the edges of this water. Why, I do not know. I walk a little further, feet squelching in the mud, looking for telltale signs of frog's eggs with their tiny black dots of tadpoles coming into being, the sort of clear gelatinous globs on the smooth surface of the water. How did I learn that these were baby tadpoles?

The Morwell River itself is an interesting phenomenon. Over fifty years ago it was diverted into a pipe for the open cut coal mine. Aboriginal artefacts on display in the reception area of the power station tell another story of a time when people sang, danced, camped and ate by the river. The open cut will be extended again. In this move, reported in the local paper, we will have an 'improved river and an improved road'. The river will once again be diverted to expand the coal mine. This time it will be liberated from its pipe and returned, according to the planning map, to a river's meandering curves. I learn that the Morwell River Wetlands is part natural, part artificial, constructed by International Power, the British Company who now own Hazelwood Power Station. The Commercial Rd Morwell Primary School has a special relationship to the wetlands and has monitored its evolution through the frogs, native trees, shrubs and grasses, and other creatures large and small who have come to inhabit this place.

The Morwell River wetlands program is integrated across all grades in the school and across all subject areas. In the early grades the children study the needs and life cycles of frogs, rearing tadpoles in the classroom. The middle grades are involved in monitoring the wetlands through frogs and other animals that live there, and the upper grades conduct scientific analysis of the wetlands through monitoring water quality. The school draws on two key community resources to sustain this program: Waterwatch and Community Frog Census, supported by the local Catchment Management Authority:

Waterwatch is one of the key things that will keep this project in focus in the long term. I see Waterwatch as the hub of the wheel, things revolve around them, because they've got their macro surveys, the Waterwatch lessons they do in schools ... Waterwatch gives focussed ongoing training for the skills, the bigger picture of things, what we do with the data, photopoint monitoring (Interview, Max Sargent, 2007).

The schools worked with the Amphibian Research Centre to develop the Frog Census program because 'frogs are the gateway to understanding the wetlands'. With the Amphibian Research Centre they developed family science nights:

He would come down for three days at a time and involve the communities and I think that's been one of the key factors in setting the scene, with each of the school communities, that wetlands are a good thing to preserve and frogs are the gateway to study the wetlands. ... he has his slide show and we do family science activities based on frogs and on those nights he trains the teachers, you have tea after school and he says here's the range of activities you'll be running tonight and he gives the background to each of those activities and the science behind those activities (Max Sargent, 2007).

These community education nights involved hundreds of families over the time of the grant: 'their response was so huge our multi purpose room was like a can of sardines, people outside the doors and windows' and they now have an ongoing community Frog Census Program funded by a partnership between Yallourn Energy (another power station in Latrobe Valley) and the Amphibian Research Centre. Once a month children and their parents meet at the wetlands to record frog calls: 'I think of one particular girl, in her family there's about nine kids and she's getting towards the end of all the kids, but Dad still finds time to come with her every month'. The night I visit the wetlands Kylie is there with her Dad taking photographs and cavorting with twin boys who are there with their mother.

It's just on dusk, mid Autumn when we drive into the site. A half full moon and cool wind blows over the Wetlands, the Freeway humming in front of us and the Hazelwood Power Station behind. Partly natural, partly artificial, the original river is somewhere nearby. Here in the wetlands the frog chorus begins. Frogs' skin is a permeable membrane between inside and out, so frogs are a good measure of a place. Ben and Jim, ten year old twins, run down the road to join us, followed by their mum, and then Kylie, one of nine children, with her Dad. Last month, because of the drought, there was no Community Frog Watch. Snakes hide in the giant open cracks, we were warned. Tonight, after recent rains, we make our way through frog calls, along softening cracked edges of the water, under the rising moon. Kids playfully using digital camera/recorders take photos and record the frog calls. We hear a whistling tree frog, and a common froglet, and on the ground we read the telltale signs of fox, wallaby and kangaroo.

Four of the people I have interviewed for the place pedagogies project have links to the Morwell River Wetlands through the webs of connection that sustain their work. Kevin Jones is a civil engineer employed by Hazelwood International Power as an Environmental Officer. He has been responsible for the construction and ongoing maintenance and monitoring of the wetlands project. Max Sargent is a primary school teacher who is responsible for the integrating the wetlands as an educational site across the curriculum of the primary school and for Community Frog Watch. Lizzie Clay is an organic farmer in the area and Chair of the Board of West Gippsland Catchment Management Authority and is responsible for the vision behind the operations of the CMA. John Durrant is an ex primary school teacher and principal who is an Education

Officer with WGCMA and responsible for community consultation processes. I asked them, in semi structured conversational interviews, about the place-making work they do, how they came to be involved in this work and how they understand it as a pedagogy of place. In the following I have selected brief vignettes from these place makers' stories to explore some of the storylines of place and place pedagogies opened up in these conversations in order to explore how we might think of a new paradigm.

Place and (vocational) identity

All four place makers grew up in Melbourne with completely different experiences of place. Place identity is mobile and can be transferred to new places. All have a strong sense of place connected to their sense of vocation. For some this has been a continuous process of development throughout their life and for others it has been more recently learned.

Kevin Jones, for example, didn't experience a sense of place attachment until he moved to Gippsland to work as a civil engineer for Hazelwood Power. He learned about rehabilitation and when the wetland was planned 10 years ago he became involved in the wetland construction and maintenance. He says that he likes *'doing things'* and understands his environmental work through his vocation as an engineer: *'I mean I'm an engineer, and building something to achieve an end result, and the measure of that with the wetlands, is really what habitat it becomes'*. Many of his the stories about the different creatures who have come to inhabit the wetlands reveal the depth of his place knowledge and attachment. A yabby claw left behind by a bird of prey tells its story:

These little animals scurry, and they stick to the shade or the long grass, and we occasionally see little bush rats, but they're so quick – they scurry in and they've got a little hole somewhere under the roots of a tree, and that's how they stay. Because you watch the swamp areas and that, and they've [birds of prey] got the wings out and the head down, and they're just – a bit like if we were snorkelling, and you're concentrating on say, looking at tropical fish or something, and you're just looking down all the time, and as soon as they see something – (swishing sound) but they have to be quick, because most things – and you're talking frogs, and lizards, and crickets, and maybe something small like a bush rat, they're very fast, that's how they survive – very quick.

The wetlands is alive for him and he knows it through his own body. He begins this story by saying that the yabby claw *'was a great lesson'* - he learns, teachers learn and children learn from the intensity of intimate observation repeated over time to read the landscape of this place. One day when talking about a threat to the wetlands, he said, *'over my dead body'*. He experiences this strong sense of identification with the wetlands through his labour, his knowledge, his passion and his commitment. He has watched it grow from the beginning.

Lizzie, on the other hand, draws strongly on her earliest experiences of place and a vocational identity based on a continuity that has expanded over time. She described herself as *'the daughter of Freddie Clay and Joycie and I grew up on a market garden*

out in the eastern suburbs or Melbourne. So we were farming, you know, growing vegies. Vegie family. And with lots of space, lots of lines of vegies, lots of trying to get out of the dishes and walking around down the paddock with my Dad'. Her earliest memories of place are sensory memories of the soil:

I think it was feeling things. Like running around with bare feet in ploughed up ground when it was really hot, because it was kind of a little bit sandy down there, good market gardening ground, sandy loam. And feeling the heat on your feet as you put your foot on the sand and then dug them into the ploughed ground, you could feel the nice coolness underneath.

She learned about the soil in her early experiences with her dad, and the importance of soil has been a continuing thread in the development of her vocational identity:

Freddie was very much into what he did as a market gardener and his soil was his big thing. I can remember running along after him and he'd be telling me, oh this is why the lettuce haven't grown very well here and this is where the water hasn't reached and this is where the fertiliser bin ran out. I can remember one particular time when he just sank to the ground and put his hands in the soil and said, look at this, you could eat this stuff. I didn't really understand what he meant then but later on I did. Lizzie Clay

In her vocation as an organic farmer, soil is the basis of a new paradigm:

Soil is the thing that I think has a lot of meaning, has lots of meanings for me. From a practitioner's point of view, from an agriculturalist point of view, it's something that isn't a part of our agricultural culture in the dominant paradigm but it's the focal point of an organic paradigm. And I've just been involved in developing Victorian government's first soil health policy that they've had since 1980's.

Storylines of embodied connection to their places are central to their sense of self and vocational identity. It is not just sense of place belonging but a deep knowledge of place learned through their life experiences and their work. Place connection and identity is learned, it changes throughout life and is strongly connected to their sense of vocation.

It can be learned in adult hood as well as childhood and in all cases is continuous and involves multiple shifts in perspective throughout life and through vocational transitions. These transitions involve drawing on all forms of learning – formal and informal, vocational and non-vocational, but experiential place-based learning is highly significant. Their place learning is never complete, it is an ongoing and lifelong process, related to their ability to imagine futures and provide intergenerational continuity.

Place pedagogies

As well as being learners each of these place makers has a strong educational role, developing innovative place pedagogies within their own vocational practice and beyond. Five themes have emerged from their practices of teaching and learning which I will briefly discuss in the following:-

- Place-based teaching and learning
- Community capacity building and networking
- Local, regional and global places
- Engaging with Indigenous relationships to place
- Imagining futures and futures thinking

Place based teaching and learning

The teaching and learning practices enacted by these place makers are underpinned by their own connection to place described above, and by their learner orientation. Because they position themselves as continuing learners they are learning with – the place and the people in those places. It is not possible for them to adopt an ‘expert’ stance or a transmission model of teacher/learner relationship. Their focus is often on the place and how the place itself is pedagogical and this can vary from a single local site like the wetlands to thinking about a region. Lizzie’s thinking, for example about what might be an appropriate response to the floods that have devastated the irrigation plain of the Macallister River, for example, illustrates the basis of a regional place based thinking:

Or maybe we pay him to put in a plantation or encourage him to put a plantation in at this point. Or that we pay him or someone, pay him if it’s on his land, to manage this as a big wetland, this place here because that’s where the river wants to break out. And if we reinstated the connectivity between the flood plain and the river. So all of these things could slow the flow down, maybe it’s just not putting it all into. I mean these ideas, they’re just ideas but that’s that systemic thinking that I think we need to be using to apply.

This pedagogical thinking arises from her knowledge of soil and landscapes, her sense of the importance of the connectivity between the flood plain and the river. They are ideas, not facts and this process of systems thinking will feed into the consultative processes enacted in the pedagogies of the Catchment Management Authority.

Community capacity building and collective knowledge

Knowledge about place can only be known collectively and cannot be owned by any one person. It is ongoing and constructed with the place. It changes as places change affected by weather and climate conditions. Any change in how we relate to our places will require collective knowledge building and action.

All place makers in this study work with community groups and approach the question of developing community capacity and community education from their different vocational identifications. Max, spoke about the hundreds of families that were educated in the community frog census program and their ongoing involvement in Community Frog Census. For him it is the community of children and parents attached to the school. Kevin spoke about the close liaison between the power companies and the communities who supply the labour for power generation and who allow them to operate as they do under a community contract; Lizzie spoke about the farmers markets as an ideal location for conversations about how people might live and farm in a changing climate. John described the processes of community consultation in the CMA and I will quote his

example of community capacity building in relation to the 'dilemma' of plantation companies in the Valley because it embodies the challenges of place learning:

We have begun the discussion with the plantation companies, to work more closely with them. I ran a forum here for our community members, and then for our staff and for our Board, and we had something like sixty or seventy people here, including a lot of our community members, and I ran it as an information forum. I had each of the plantation companies here, including Gippsland Private Forestry, which is mainly farm plantation and forestry. And we had, for about three hours, we just had an information session. So, that was capacity building for everybody. We then took everybody on a tour, not the same day but another day, of – well, anybody who wanted to go, and we had about – we filled the – we just about filled the forty seater bus. We took them around to a number of sites, looking at young plantations, looking at harvesting the plantations. We had presentations from the Mater Plantation Company, the Green Ridge plantations up there, as well as from our own staff and so on. And it was fantastic, it helped to build the knowledge and the understanding of how plantations work, and so on. John Durrant

Industries in the Valley are a reality and the CMA is interested in developing community capacity to care for their places in the light of industry activities that may cause damage to them. Part of this is to bring everyone into conversation and the community people who participate do so on the basis of their own place attachments and developing place knowledges. The 50-60 community volunteers who make up their consultative groups are linked to 700 organisations across Gippsland. If they give these people tools to spark conversations about some of the complexities they are dealing with in relation to land use there is a huge multiplier effect for their work in capacity building.

The place makers in this study constantly activate networks of place knowledge in relation to their ongoing learning as well, making webs of connection across the region and beyond.

Working with Indigenous relationships to place

All participants acknowledge, and work with, past and contemporary Indigenous place relationships but again this is ongoing and presented as a work-in-progress. There are stories that deal with issues around reconciliation, supporting children in their Indigenous identities, sharing Indigenous place stories and knowledges in the wetlands, and working out how to work in appropriate ways with local Indigenous people. I will quote just one example here of John Durrant's work with Gunnai/Kurnai Elders and the CMA because of its power in terms of a place pedagogy. John described visiting local Aboriginal organizations and deciding to arrange a meeting of Indigenous Elders and CMA Elders. The Indigenous Elders chose the meeting place,

And it was the meeting place for Aboriginal tribes, they used to actually, come and meet there, so it was a meeting place, a very special place. It's one of those special places for Aboriginal people. Probably, the most special place in this region. So, the Knob Reserve at Stratford. It's on a bluff overlooking the Evan River. And there's grinding stones,

ochre stones - and you can just about visualise the way it was. The sad thing is it was also the site of a mass slaughter. So, it's good memories, but it's got sad memories.

The place that the Elders have chosen is not only appropriate as a meeting place but is a place that is profoundly pedagogical. It allows them to tell the stories of a past relationship to the places of Latrobe Valley, but also to acknowledge the painful experiences of colonisation. From this basis a deep and respectful relationship can be built.

So, we sat around and had this long cup of tea first thing. Then, we went for a walk around the site, and we allowed the elders to talk to us. We did no talking and I ... our staff, I said, say very little and ask questions, but, I said, the morning is very much where we want to have the Indigenous people share with us, their story. So, I said, please don't talk, other than just quietly ask questions. I said, it's important for us to get to know them.

Thinking locally, regionally and globally

All place makers were aware that it is no longer sufficient to think of local places as closed and bounded systems and that we need to learn to think locally, regionally and globally. In the wetlands, for example, the extreme drought which dried up all the water and killed the stocks of native fish was seen to be part of the extremes of weather that Australia is experiencing as a result of climate change. Lizzie talked about the challenge of getting people to engage in systems thinking involving the interconnections between all aspects of an ecosystem. In the Catchment Management Authority, John talked about how the community consultative groups are structured to recognise people's very local place attachments and then they have to learn to think regionally. They have a layer of community consultative groups related to local places and then another layer related to regional portfolios such as biodiversity, or water:

Our portfolio groups are across the whole region, so not parochial. And they're all expected to take a portfolio, so they're expected to move out of their Wellington group to a diversity of portfolio, or water, or whatever it might be, and to look across the whole region. Now, sometimes they'll be a little parochial in that group. They'll say, oh, it's important – and you say, yeah, but what does it mean for the whole region. So, it's good for them to think regionally. John

The intensity of recent drought, fires and floods in Gippsland meant that people had to think globally about the impacts of climate change, however, it is important to maintain the connections between the local and the global because it is local places that have to be nurtured:

Yeah, the dilemma with some people, and you would understand this from the academic level, is that sometimes people can't get down from the clouds, they're thinking just so theoretically and academically, and globally, or whatever, that it becomes of little practical use. So, one of the things that we have to keep, some use, it's so important to think globally and nationally, and all that sort of stuff, but at the same time we have a

region that's been – Gippsland's been devastated by fire. We have to deal with that, we have to deal with people and communities. John

Imagining futures, futures thinking

One of the strongest and most surprising characteristics of the conversations I had with these place makers was the extent to which they engaged in futures thinking. They had a long term vision and embraced a future of risk, complexity and imagination. They employed this as a strategy in their own thinking and learning and in the practices they invited others to engage in. Futures thinking is about encouraging conversations about complexity and risk, it is concerned with intergenerational longevity, and it involves employing creative and innovative pedagogies and approaches.

The context of change, risk and complexity for Gippsland is the extremes of climate experienced as a sequence of drought, fires and floods:

Then the fires came along and created another huge impact, one of the worst fires we've ever had. The fires were so intense in some areas that rocks in the middle of rivers exploded with the heat. Now, that has never happened before. ... Then came the heavy rainfall in June. It was so extreme in some of the areas that the landscape shifted in such a way that it changed the river valley, or changed valleys, in such a way that hasn't been seen for a thousand years. So, in other words there was landscape change, because some of the valleys have changed in a way that's never, you know, like, almost like a glacier will change – dramatic change, huge change. Whole hillsides just disappeared. So, we went from drought, to fire, to flood, and now, second flood.

In Lizzie's terms, how do we learn to farm in a changing climate, or more generally, how do we learn to live and operate in a changing world?

...providing opportunities for people to process their thoughts in a very quick, fast changing world where futures are no longer really clear and we really need to be thinking about multiple futures and how to manage, risk manage, possibilities of dozens of different sorts of futures. How do we get communities to go along with that or to approach things like that. Water, fire, floods, bush. It's all very uncertain. I think it's really important that we find engaging ways to get people to be thinking systemically I guess, thinking about all that complexity.

John described an exercise where 40 community members were invited to use creative processes to 'unpack a bit of a vision of what each of those catchment eco-systems really means in terms of values and what they value, what they think the community values, threats and maybe a future direction for each of them'. Kevin Jones told a story about the capacity of frogs in Lake Eyre to go into torpor and survive for decades and the wonder of the frogs returning after rain to the wetlands. The native fish all died out in the drought and this year he will replace the stock of native fish, 'and at that point, if we reach that, we've actually completed the wetlands project, well that'll be year eight of, I don't know, a thousand, so a long way to go, but we've given it a flying start'. Futures thinking thinks in terms of geological time, of place, and imagines the capacity of place to regenerate. I

missed out on Community Frog Census on the night the flood waters arrived at the wetlands but got an email from Max reporting on the excitement:

The wetlands experience was exceptional tonight. We watched the floodwaters filling the wetlands, to cover the sampling platform steps, over a period of an hour. It was fascinating to watch. The depth pole was 75 cm on arrival and went over 1200cm within the hour and soon the pole was submerged. The last photo, in the dark, had the reflection from the eyes of a spider as the last sight just before the pole went under.

Max worries about who will carry on the work of learning from the wetlands when he retires. Our solution to the problem of intergenerational succession is to teach the teachers and we have become involved in a program that integrates the Morwell River Wetlands activities into the vocational education of teachers.

Thoughts for discussion

I am not going to offer any conclusions to this paper, just some observations and ideas that might be a basis for further discussion.

My sense, as with others in Latrobe Valley, is one of urgency to find solutions that are social as well as ecological, addressing some of the serious issues faced by people and places in the Valley at this point in time. The VET system has failed Latrobe Valley. There is a desperate skills shortage, to the extent that new developments are being rejected by the Victorian Department of Regional Development because we cannot supply the labour. There is a huge potential labour market of unemployed people, many of whom have experienced intergenerational poverty, unemployment and extreme socio-economic disadvantage. There is an Adult and Community Education system that could potentially reach these people that is a radically under funded and colonised by narrow economic thinking and narrowly conceived educational outcomes. There is the challenge of climate change both as a discourse that stereotypes people in the Valley as responsible for the emissions of the power stations, and as an effect in drought, extreme weather events such as fire and floods. These clearly require a different educational response, and one which is potentially being developed by people working at the 'coalface' as it were.

I have outlined the elements of a new paradigm and practices above. These are some of the ways that I think they could be taken up by a new system of vocational education and training in the future:

1. Put place on the agenda.
2. Develop a new paradigm of teaching and learning that includes developing collective rather than individual response, values Indigenous knowledges, teaches people to think locally, regionally and globally, and employs futures thinking.
3. Develop a stronger tradition of independent empirical research.

4. Re-claim the terms 'vocational' and education. The word 'vocation' comes from the Latin, *vocare*, meaning to call, originating in the idea of a divine call to the service. It is defined by the Oxford Dictionary as a strong feeling of suitability for a particular career or occupation; a person's employment or main occupation, especially regarded as particularly worthy and requiring great dedication; and a trade or profession. Taken together these ideas suggest a strong personal identification with the occupation for which one is trained, such that the identity of the person is tied up with the meaning that being in that occupation gives to one's life. This has important implications for how we think about vocational education, in particular the vocational education of vocational educators.
5. Adopt a whole systems approach to how we think about vocational preparation which includes the current skills based VET system, the ACE sector, and the community sector and understand what they each have to offer, how they can inform each other, and work together for common outcomes.

VET is a crucial sector in the education spectrum. It has responded to the need for skilled workers in the past, but the urgency for practices that will ensure a sustainable future presents new needs and unfamiliar challenges to adult educators. It is imperative to take up those challenges with fresh, forward looking thinking and new approaches to the education of adults.

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