Abstract

Developing partnerships that support biosecurity and sustainable livelihoods in regional and remote communities have at their core, sound processes and structures to share, create and recognize emergent and local knowledge. Through their analysis of the key elements of integrated rural development in East Nusa Tenggara, Indonesia, Blyth et al. (2007) note a sustainable livelihood approach requires the integration of physical, economic, political and sociocultural environments. Blyth et al. (2007) also outline the range of opportunities for integrated rural development through enterprise development at a local level. A key element of natural cultural resource management is the management of plant biosecurity through local and national partnerships between community members, land managers, regional bodies, government and researchers. The management of plant biosecurity at the community level has the potential to be embedded into enterprise models that draw on local knowledge and build local capacity and build connections with national policy approaches. This paper reports on a macro-analysis of enterprise development and training models in Indigenous communities across Australia and considers the potential role of enterprise training in embedding plant biosecurity management at a local level to achieve environmental, economic, cultural and social sustainability.

Introduction

The efficacy of practices to ensure plant biosecurity, i.e. identification and management of incursions of pests and diseases in regional and remote communities, is connected to the responsiveness and support of the relevant knowledge management partnerships. Blyth et al. (2007:11) have identified essential components for integrated rural development and its implementation. They include learning about better approaches from past failures, developing flexible approaches that focus on capacity building at a local level, and involve shared ownership of learning models that are ‘people-centred and people-driven’. They note learning models need to recognise and build on existing local knowledge about opportunities, limitations, and shared understandings of issues at the micro and macro levels. Approaches to enterprise development and training that build from local knowledge and strengths have the potential to engage local and broader knowledge in learning partnerships that embed plant biosecurity practices and management systems within regional communities.

Engagement in learning is informed by people’s cultural and social experiences, relationships and identities. Developing successful approaches to training in remote and
regional contexts with culturally and socially diverse people is dependent on effective partnerships and the recognition of diverse knowledge systems as they relate to the worlds of work, community engagement and learning. These processes may be innovative in that they are adaptive and not prescriptive. They are likely to be sustainable if they are embedded in local community management structures and create links with other stakeholders beyond the local level.

The Australian Cooperative Research Centre for National Plant Biosecurity’s pilot study in Australia and Indonesia identified the need for a training framework that endorsed local knowledge for the community management of biosecurity in both countries. This paper reports on a macro-analysis of the findings of a series of Australian recent studies related to enterprise development and training that support local workforce outcomes through learning partnerships. These studies predominately focused on remote Northern Australian communities and explored the potential to improve economic and community outcomes through training and investment based around enterprise development. The enterprises included a wide range of income generating businesses managed by and for Indigenous people in tourism, construction, aquaculture, land management, music, catering, art, transport, horticulture, education and hospitality.

The analysis showed that developing a training framework to effectively engage local and broader knowledge in learning partnerships has the potential to support embedding plant biosecurity management in regional communities. This paper discusses these findings and the implications for developing a training framework that focuses on partnerships and relationships, rather than systems. These partnerships are essential to building cultural, economic and socially sustainable livelihoods. The paper identifies key elements of a successful training framework for regional Indigenous communities with the aim of outlining appropriate approaches for training in plant biosecurity through enterprise development in these communities. The framework focuses on approaches that embed plant biosecurity management in a sustainable way, endorse local expertise and create links across policy structures.

**Significance**

The successful identification, management and eradication of plant biosecurity incursions across the extensive and sparsely populated Northern Australian coastline is a challenge that is being addressed by effective partnerships between Indigenous land managers and relevant government agencies. This biosecurity surveillance, reporting and management work has the potential to be developed to support economic, cultural and social sustainability through connection to existing enterprises and areas of knowledge strength. The *Northern Territory Indigenous Economic Development Strategy* recognises the strength, resilience, diversity and cultural integrity of Indigenous people, and the high levels of disadvantage which impact the capacity of people, families and communities to engage in economic and social development activities. Indigenous enterprise training and development has operated in many cases to meet the aims of Indigenous people and communities. Altman (2001) in a study of sustainable development options on Aboriginal land, suggested that there is a need for a hybrid approach that includes scientific, biological, social, commercial viability and *Indigenous expert assessment of cultural*
practice (p8). For enterprise development and training this means developing a new way to understand and incorporate all of the social, human and physical capital in any community or system. Training programmes with remote Indigenous communities need to relate to a new paradigm, one that has an economic development dimension and targets *previously unrecognised productive activity spin-off benefits to industries and regions beyond the Indigenous estate* (Altman 2001:8).

The development of an effective approach to training and regional economic development must include strong partnerships that create individual and community confidence, sustainable career pathways and effective regional strategic development (Allison et al. 2006). Blyth et al. (2007) have outlined the strategies needed to improve the design and implementation of integrated rural development projects. These include:

- an institutional environment that builds shared ownership of local initiatives and coordinate decision making across and between communities and stakeholders
- approaches to projects that are flexible, source local knowledge and informed by location-tailored research
- analysis and support of social capital relationships and management and
- sustainability through community participation at every stage, training local staff to continue project and ensuring projects are integrated into existing institutions.

Embedding plant biosecurity at a local and national level draws together the principles of community management of plant biosecurity in relation to leadership, governance and change. This proactive approach to managing exotic plant pests (EPPs), works through social partnerships in learning across community, policy, regional and national boundaries. These partnerships connect biosecurity management and implementation with existing economic, cultural and social structures and so increase chances of sustainability. In Australia, this strategy has been developed to respond to the changing nature of work and economic viability in remote and regional communities. This is responsive to recent national policy changes about Indigenous community and workforce development and Indigenous people’s desire for economic independence.

**Literature review**

Bourdieu (1990) described *habitus* as the socially constructed systems that organise practice and representations and essentially socially negotiated nature of meaning. The notion of *habitus* recognises the social construction of knowledge and its mediation through individual and shared action. Innovative and successful approaches to learning partnership and regional development in remote and regional contexts with Indigenous people necessitates effective partnership and the recognition of diverse knowledge systems as they relate to the worlds of work, community engagement and learning. Social partnerships catalyse and enable change in human or social policy (EU Guideline Principles 2004) Social partnerships *in learning*, then, are the interagency and interdisciplinary relationships that enable effective learning in different disciplines, workplaces and training sites. Social partnerships in learning frameworks are used to; examine diverse knowledge systems, develop capacity building processes and understand
the underlying relationships that facilitate connections, engagement and decision making between government, non-government, enterprise, community, stakeholders and individuals (Wallace 2008:7). These frameworks operate at and across all levels i.e. involving individuals, organizations and learning systems.

Understanding multi scalar and multi dimensional relationships is central to understanding the ways learning works in context and the key agents in the relevant relationships. Seddon et al. (2004) have described social partnerships as the localised networks that engage stakeholders in a local area in a network that works on issues and activities of local importance. Effective partnership work embraces and harnesses the contributions of local partners and external agencies, their interactions and the changes they make in the collective work of realising shared goals. Social capital theory (Woolcock 2000, Putnam 1998, Grootaert et al. 2004) provides an analytic framework to understand relationships between social units, agents, and institutions across different levels and disciplines, and recognises issues of value (Schuller et al. 2000). Social capital is defined as the groups, trust, networks and norms people access for a range of purposes. Networks (Putnam 1996) comprise bonding ties which link people of similar level and demographic characteristics, bridging ties which link people with different demographic characteristics (Gittell and Vidal 1998, Narayan 2002, Putnam 2000), and linking ties which connect people to those in authority and institutions (Woolcock 1999). These forms of social capital are informed by social practice and the related social constructs and relationships. In a broad sense, social capital refers to resources accessed through relationships (Portes 1998, Falk et al. 2003, Burt 2000) and the kinds of involvement in networks and relationships in a collective (Putnam 1998). Flora has identified entrepreneurial social capital, a particular arrangement of social capital that relates to community economic development (Flora and Flora, 1989; Flora, 2004). Social capital provides a metalanguage and framework to understand social networks that occur in learning partnerships.

The development of an effective approach to training and regional economic development must include strong partnerships that create individual and community confidence, sustainable career pathways and effective regional strategic development (Allison et al. 2006). Mitchell et al. (2006:32) noted networks are complex, constituting multiple parties with diverse and challenging goals. Networks are also used to assist practitioners and varied stakeholder groups to build relationships and be responsive to students and community needs. They recognise and are able to work with a range of knowledges and associated practices. Educational systems need to recognise and integrate the plurality of the society in which it operates.

Enterprise development and training is defined in this context as training constructed that focuses on supporting enterprise development that draws on local knowledge and is connected to local governance structures. Customised training is tailored to the enterprise owners’ development and mapped to nationally accredited training. In Australian Indigenous contexts, customised training is sensitive to local situations and explicitly makes links to the relevant national agendas. As Indigenous enterprises are operated by the community, rather than individuals, owner-operated, enterprises emphasise usefulness and employment for community members rather than profit. Indigenous community
enterprise members, while having a marketable product, have far less capacity to access the capital to develop their business than non-Indigenous business owners (Flamsteed and Golding 2005). This includes access to business services, commercial labour markets, business models and sites and learning through involvement in other Indigenous businesses.

Flamsteed and Golding (2005) emphasised the importance of learning through business and incorporating learning opportunities that are linked to earning, context specific, developed in parallel to actual work and applied through practice in commercial business activities. They also noted the importance of incorporating resources that developed in terms of Indigenous entrepreneurs and enterprises and potential students and communities needs. Developing professional learning partnerships that engage practitioners in transformative learning incorporates the active management of knowledge. Knowledge management (Wenger 1994) is more than communication flows, interpersonal connections, document repositories and institutional and cultural norms about the value of knowledge. It is crucially important to have the active involvement of practitioners in the process, because they own the knowledge and understand its implementation, what should be recorded formally, and which forms of recording are appropriate.

Methods

A macroanalysis (Chambers 2004) of a series of enterprise development projects undertaken by a partnership of Indigenous enterprise owners, Registered Training Organisations and industry representatives explored the role of accredited training and social partnerships in learning effective pedagogies in enterprise development and training. The sites for the research were all regional, remote contexts that are institutionally based resource contexts, where community based development and training has always been the greatest challenge. Enterprise development offers a sound and sustainable vehicle for developing and implementing a locally relevant training framework.

Key partners in the projects analysed were Indigenous enterprise owners across northern and central Australia, Kimberley College of TAFE, CHARTTES Training Advisory Council, and Charles Darwin University. The enterprise development and training project analysed were conducted between 2004 and 2008 examined;

- The development and trialing of a range of e-learning, e-business tools and information that support the establishment of a range of enterprises.
- Mapping enterprise development to nationally accredited training competencies
- Developing e-tools for assessment using visual, written, digital and cultural literacies and competencies. These include ways to formally recognise and assess local knowledge using digital photographs, videos and stories and e-portfolios.
- Representing Indigenous enterprise owners’ expertise, workplace learning, competence and contexts in a teaching and assessment tool mapped to the relevant nationally accredited qualifications.
• Pedagogies that enhance practitioners’ ability to work in flexible ways with diverse client groups and develop innovative and flexible approaches to assessment and skills recognition.
• Ensuring relevant, quality training and qualifications are implemented that support economic independence and knowledge management at a local and national level
• Policy and practices that support sustainable enterprise training models with Indigenous people and achieve high level employment outcomes for Indigenous people and communities.

The thematic macro analysis of the project’s outcomes, considered the approaches to sharing knowledge and ownership and work-based learning. These include addressing infrastructure issues such as funding, technology and skills sets; approaches to sustainable enterprise learning and production, professional development of local and external expertise for training focusing on partnerships and relationships rather than systems to effect change.

Results

Often the jobs or occupations that are identified for training in Aboriginal communities are those that do not incorporate or relate to traditional knowledge, languages or skills. They target the weaker skill levels of participants rather than capitalising and building on their strongest skills such as performance, cultural work and Indigenous traditional and contemporary knowledge (Mark Grose, Skinny Fish Music, interview 19/04/2005).

Workbased Learning: Workplace based learning and assessment was a key component of VET delivery where work, learning and assessment were well integrated. In the enterprise development workplaces, learning was based on the requirements of working in the Indigenous community context and cultural domains. Training was implemented according to students’ individual needs and their involvement in work and cultural responsibilities and obligations. Through workbased learning, assessment was conducted by assessors strongly connected to the relevant enterprise’s work context. In this way, training was customized to reflect the needs of the Indigenous client group. Trainers, trainees and employers negotiated the learning projects to match appropriate workplace activities. Training activities and resources were developed over time and become part of the learning culture and resources in the community. In this environment, student support was characterised by initially integrating the principles described Langton et al (1998), not an additional activity.

Learning Partnerships: All case studies highlighted the importance of community ownership of learning partnerships. This challenged training providers and other stakeholders to take a holistic approach to engagement in the partnership and continually ensured enterprise owners maintained responsibility for the learning contract. It was not the role of training providers to generate the enterprise ideas, rather they played an important role in sharing what is possible and how the VET system can help. Seeing what other people do was a great way to stimulate the imagination, as projects develop through
sharing. Some of the learning was undertaken with other Indigenous enterprise peers through a community of practice. This reduced the emphasis on the trainer as the only expert. In successful partnerships, facilitators, mentors and partners worked together with Indigenous enterprises. This was achieved in a number of ways. Trainers developed training experiences and materials in response to the area of need or interest identified with the enterprise and student. Training providers had a role to make people aware of a range of options but the vision had to come from the community. This changed the way a training team in a learning partnership was constructed, including trainers, community leaders, Aboriginal development officers and industry partners. Partners varied between the enterprises, however the members of each enterprise viewed them as being essential to their enterprises success. Industry support and business partners, where possible, were essential to enterprise development and sustainability. There are many ways this can happen, but all emphasized the importance of the Indigenous family, clan or tribal group leading the direction and processes of the enterprise and training.

**Professional practice and delivery:** Quality training programmes facilitated by expert trainers/learning facilitators over a long term partnership made a significant difference to enterprise success. Effective training programmes developed though shared knowledge and trust, assumed Indigenous people had considerable knowledge and competence to bring to the training relationship and focused on positive elements and outcomes. Trainers with high skill levels in relevant areas and appropriate cross-cultural knowledge were identified and supported to develop sound learning relationships. It was important to link delivery of training (and assessment) to actual industry practice, relating both directly to work on the ground.

Working with Indigenous enterprises is based on long term interactions based on trust and commitment. Partnerships with Elders and local experts were significant in recognising students’ knowledge, competence in a range of contexts and supporting the integration of learning into the everyday work environment. It is only after having a clear idea about participants’ aims for their enterprise that the trainer could negotiate the training plan, even when the trainer disagrees with that assessment. The most successful enterprise training programmes started with what the individuals wanted to achieve and then worked back to the training system, deciding which units would be appropriate, which should be delivered together, when, who else might need to get involved and how it could lead to a full qualification. This tailor-made approach to developing a training plan took considerably longer than the development of a standard qualification’s training plan, is was negotiated over the life of the partnership and achieved better outcomes for all stakeholders. This was evident in workforce outcomes, completed studies, continued studies and extension of the programme to other enterprise partners.

**Training frameworks:** Qualifications were not the final aim of training; employment and personal outcomes needed to were the focus of any training framework. Training outcomes and assessment were more relevant and successful where delivered on the job, particularly in remote areas, where industry ‘context’ is very different from anywhere else. There was a need for training providers to be creative in exploring a range of training packages combinations that are customized to clients’ needs. That is, programs that consider clients’ long term needs first, and secondly the other issues such as who will
fund it, what will be delivered, who will deliver it. Training frameworks developed understood the flexibility of National Training System and ways to adapt the relevant training package to meet enterprises’ requirements. The framework reflected the enterprise’s goals rather than a single qualification or unit of competence.

*Diverse knowledge systems:* Enterprise training recognises the importance of working with local community knowledge about governance, cultural knowledge, land ownership, and enterprise owners’ priorities for the business and their lives. Digital knowledge systems and resources offered considerable opportunities to work in new ways. Technology has become increasingly intuitive and accessible in remote areas, making the use of ICT more viable. Digitally based resources supported people to learn and demonstrate competence across language and knowledge systems. The key to this approach is the role of Indigenous people in the development of the resources, using software and hardware resources within the enterprise and collecting evidence through an e-portfolio.

**Discussion**

Any training enterprise development training is framed by social learning partnerships that work across diverse knowledge systems and unequal power structures. Effective training is first and foremost about good partnerships, investing in the development of strong partnerships before, during and after training periods will improve the training and its outcomes, in the long term. Being able to accurately understand, describe and support frameworks for social partnerships in learning will make a significant difference in moving from a check list for effective training to being able to actualise the concepts described. Indigenous enterprise development training is part of core business and can be effectively developed with mainstream and Indigenous specific programmes that focus on building successful enterprise. Training is discussed, negotiated in the context and with the people who will participate in the training. Training is linked to diverse knowledge sets and experiences, this requires partnership with the people who recognise, understand and own this knowledge. These partnerships need to be developed so that the professional decisions are valued and recognised, this may be through investigating the developments in the Training and Assessment qualifications and associated payments.

Training can be negotiated within a framework that incorporates employment outcomes, teaching, assessment and learning strategies, units and resources. The framework can include a number of approaches that can build better approaches to training with Indigenous people and enterprises. Skills sets may be a better starting point for designing training plans and qualifications that fit Indigenous enterprise owners’ priorities. By analysing the work in context and as it develops over time, skills sets can be established that are then matched to competencies. Digital resources offer the opportunity for people to demonstrate their competence? in audio, visual and written forms, that can be flexible, mapped by Indigenous people to their knowledge systems and expectations and to more accurately represent Indigenous people’s knowledge. As effective resources are developed and used by businesses they will form the examples for future training and development, and their developers becomes the future trainers. What is important then is
ensuring people involved in training have digital literacies and the confidence to work across a range of emerging technologies.

By understanding learning as a social activity framed through relationships or partnership, organisational barriers can be addressed. By incorporating learning partnerships into the workplace through active involvement in learning communities, the possibility of improving organisational learning is increased. This could be by providing catalysts, support for action and effective feedback about outcomes. Effective processes need to group complementary professional interest, ensuring sufficient access to resources, change management, evidence based practice and celebration of success. Learning partnerships concentrate on providing valuable and transformative learning opportunities to create new knowledge, understandings and solutions to problems in the group, rather than the transmission of knowledge and skills (Smith and Blake 2005). Whiteford (2005:45) notes the importance of linking professional development to identified competencies that are valued in the workplace.

Learning opportunities that relate to the students’ social practices and group memberships may build bridges between students, educators and communities’ understanding of each other’s knowledge and use of literacies. Developing identity affirming learning experiences can support regional students and communities’ identities. If the educational system operates from a view that assesses what people coming to learning do not have – a cultural deficit view – their knowledge is not being recognised. The deficit view of students’ knowledge actively disempowers teachers and students, reducing their opportunities for learning. If a student does not identify themselves as a part of the classroom; its literate practices, knowledge and identities it is understandable they would reject participation in a learning experience that negates their identity as an individual and in relation to other groups.

Educational systems that engage with regional community, industry and government stakeholders may work across knowledge systems in their relevant contexts. Innovative approaches to education are based on relationships through locally based action for shared benefit. While this has been the goal for educational institutions and policy for a long time the missing element has been an understanding of the multidisciplinary and multiscalar relationships that underpin information exchange and shared engagement in the university’s process and outcomes. These are described as social partnerships in learning. These social partnerships in learning are the connecting tissue between learning systems and agents.

Social partnerships in learning are the interagency and interdisciplinary relationships that enable effective learning in different disciplines, workplaces and training sites. Social partnerships in learning frameworks are used to examine diverse knowledge systems, capacity building processes and the underlying relationships that facilitate connections, engagement and decision making between government, non-government, enterprise, community, stakeholders and individuals. These frameworks operate at and across all levels i.e. involving individuals, organizations and learning systems and are constructed to understand the connections between systems and the learning that underpins those connections. While important these connections are generally poorly understood and
managed. The development of a sound basis for understanding and working with social partnerships in learning can impact on the planning, negotiation, implementation and recognition of research outcomes in the long term.

Social partnerships in learning frameworks help build flexible and porous boundaries that increase inclusion, recognise the diverse knowledge systems that operate and more importantly understand their interaction to make powerful connections and alliances between groups and knowledge. This does not mean everyone agrees but that stakeholders understand and are able to work in complex environments. An important element is that while educational institutions are good at acquiring and developing new knowledge, we need to do better at connecting this to lifelong approaches to learning and local contexts. This would be seen through understanding and negotiating ways to work through difficulty and take advantage of opportunities, manage change in capacity poor environments and build sustainability and formalise flexible partnerships.

Implicit is the development of powerful connections that are based on joint need and sharing capacity. Social partnerships in learning can be developed through pedagogy, policy and research. These include understanding social partnerships in learning as the underpinning knowledge across all disciplines. By explicitly understanding how to work across systems, students are better able to negotiate and rationalise their learning experience. Educators support the connections by accessing approaches to learning that use problem based learning, that are linked to local enterprise issues and customise learning to the individual investment in building good networks around knowledge and capacity. This moves the focus of teachers’ professional development to pedagogical approaches to capitalise on individuals and their strengths rather than focusing on normalising systems. The use of ICT supports multimedia and multiliterate approaches to knowledge sharing and assessment that value diverse knowledge systems.

In this paradigm, students’ journeys are planned and identified resources are part of a lifelong journey, one that supports development of in-depth knowledge and avoids compliance driven approaches to completing a qualification. The empowerment of students and educators would be supported by moving from top down approaches to education to learning partnerships and knowledge sharing that includes academic, professional and community knowledge and imperatives as a resource and basis for co-creation of knowledge. Social partnerships in learning can only be developed in partnership with people from a range of disciplines, as each discipline describes partnerships and knowledge management in different ways. These approaches inform the metalanguage and cooperative approaches to understanding social partnerships in learning.

Working in partnership across knowledge systems involve recognising that the work is complex and, at times, uncomfortable. A major challenge is to understand the unsettled and discomforting states of partnership and that this is an important part of developing a shared basis for working and sharing knowledge as it relates to various contexts. In many ways this is not new but having a framework to operationalise it, is new. Relationships of trust take time but are fruitful in achieving positive outcomes for all stakeholders, by working from across three different knowledge systems (community, government and
education) and taking time to develop that trust the team could see new opportunities and be flexible.

Summary and conclusions

Analysis of regional learners’ experiences of learning engagement challenges formal educational institutions to consider the appropriateness of current approaches to supporting students’ learning. Social partnerships in learning offers a framework for shifting the focus of educational practice and policy. The continued input and ownership from stakeholders is essential in this process, in combination with the ability to analyse, articulate and operationalise partnerships that improve engagement of learners, educators, community government and industry stakeholders. These partnerships can contribute to and benefit from the development of better processes and modeling that focuses on improving outcomes for individuals and communities and provide a framework for improving educational and workforce outcomes in regional areas.

Developing an approach to community management of plant biosecurity that recognises the expertise and commitment people have to biosecurity can be supported by collaboratively develop a training and skill recognition framework. This framework can explicitly endorse community knowledge and skill sets that focus on identification, intervention, management and eradication of plant biosecurity. The content would be developed through a sustainable ‘patchwork of enterprise’ development and training development opportunities in regional and difficult contexts integrated into existing and developing structures. By explicitly recognizing and endorsing local knowledge and skills, connections to policy level descriptions and support can be developed that ultimately improve outcomes for communities’ economic, cultural, social and economic futures.

References


Wallace, R. 2008 Identities of reluctant students: Constructions of learners’ identity against educational institutions’ best intentions NCVER: Adelaide

Whiteford, G. 2005 Knowledge, Power and Evidence: Critical issues in Evidence Based Practice in G. Whiteford and V. St Clair Occupation and Practice in Context Elsevier: Sydney

