

Extension Models and Best Practice in Extension

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Summary

This paper emerges out of a two year national review of extension and education across Australia. It develops extension theory by looking at a range of effective current extension/education projects to see 'what works and why'. Through the analysis, a number of different extension models were confirmed as underpinning extension practice. A significant finding was the importance of the interplay and interdependency between these different extension models. It introduces the 'Capacity Building Ladder' demonstrating this interplay and the concept of C2E2S2 - or Community Capacity Extension & Education Support System. The paper also looks at individual models to highlight best-practice within models to facilitate effective outcomes.

Introduction

Ten years ago the 1993 Extension Conference that triggered off the establishment of APEN grappled with the term and definition of extension. Since its establishment, issues surrounding the meaning of 'extension' and the appropriateness of the word in defining the organisation have been raised. However APEN –with the “E” word - has managed to maintain a reasonably constant membership of 500 people and continues to hold extension forums and conferences such as this.

And now we deal with 'best practice in extension' – as if extension and what it entails is a given! Perhaps it is that we have a group understanding of what extension is intended to *achieve!* In today's parlance, I would describe this as:

The outcome of extension is capacity building in individuals and communities.

Over the past two years *Coutts J&R*, *Roberts Research & Evaluation* and *AgInsight* have been involved in a project funded by the Capacity Building for Innovation in Rural Industries Co-operative Joint Venture. This venture is comprised of a number of Research & Development Corporations and other bodies¹ with an objective to provide a critical mass of funding and direction for research into capacity building. One of their core initial projects was a review of extension and education across industries and regions. This is the project that we have been undertaking. The review complements the two other original commissioned projects: *Fostering Involvement* (developing strategies for improving participation in learning activities) with Jenny Andrew; and *Organisational Structure* (improving future cross-institutional support for extension/education) with the *Rural Enablers* (see Macadam et al 2003). Extension, then, has been viewed by the participating funding groups as central to capacity building for innovation in rural industries.

¹ The Rural Industries Research and Development Corporation manages the Cooperative Venture on behalf of Agriculture, Fisheries and Forestry Australia; Meat & Livestock Australia; Dairy Research and Development Corporation; Land & Water Australia; Murray-Darling Basin Commission; Grains Research and Development Corporation; Sugar Research and Development Corporation; and Grape and Wine Research and Development Corporation.

Capacity Building

There is not much to be gained in moving to a complex argument about the definition of *capacity building*.

The Cooperative Venture for Capacity Building and Innovation in Rural Industries has a 'shorthand definition' of **capacity building** as being about... *increasing the abilities and resources of individuals, organisations and communities to manage change* (News No 1 March 2003). Definitions taken from the National NRM Capacity building framework described **human capital** as...*the capability of individuals* and **social capital** as...*the level to which social networks, relationships and processes within a community support individuals to exercise their capabilities*. (Coutts 2003).

For the purpose of this paper – and exploring the best practice for extension – these definitions will serve the purpose. It is important to recognise that we are dealing with the 'abilities' or 'capabilities' elements with extension and education. Thompson and Pepperdine (2003) defined 'capacity' overall as an *ability to act* while recognising that a number of inter-related elements were needed to enable such action.

Based on these definitions then, extension across the range from *technology transfer, problem solving, education* and *human development* (Coutts 1994) would all therefore contribute to capacity building at some level.

Community Capacity Extension & Education Support System (C2E2S2)

In the 80's and 90's there was a lot written about the *Agricultural Knowledge and Information System* or **AKIS** (Röling & Engel 1991) which captured the total individuals, agencies and organisations that held and/or contributed to the overall knowledge and information relevant to achieving an outcome and their interaction.

With a broadening of the understanding of extension beyond agriculture to *communities* (or *communities of practice*) and the focus of outcomes on *capacity building*, then it becomes helpful to think about extension projects/initiatives in terms of their place in the *Community Capacity Extension & Education Support System* – or the **C2E2S2**.

In this context 'support system' does not discriminate between *funders, community participants, researchers* or *extension/education providers*. **All** parties can support the system.

Best Practice

Best Practice is not static – it is changing and improving through examining our practice and it's results. This is why the 'reflection' part of the *action learning cycle* is so important – we can't sit on our laurels, and we can't learn if we don't reflect and research on what we have been doing.

We also need to remember that action research cycles have an arrow taking us to the *next* cycle. Just because we come up with 'best practice' based on our reflection and research, doesn't mean that it can't be revised further over time and changed circumstances.

This project gave us an opportunity to reflect on *best practice in extension* as we examined over 50 recent and current projects across industries and regions across Australia. We used a common framework in our analysis to capture specific structures, processes, outputs and outcomes. We also endeavoured to look at these projects in the changing context surrounding extension in Australia in recent years.

The focus was not on popular *extension theory*, but rather on *actual extension practice* to then be able to ground a new generation of extension theory.

A key finding was that *best practice* was important at the **macro-level** as well as at the **individual project level**.

Models

When we examined the projects, their underlying philosophies and the way they operated we confirmed a number of models proposed earlier by Coutts (1997) under which extension projects easily fell. We have written about these before:

The Group Facilitation/Empowerment Model: This model focuses on participants increasing their own capacity in planning and decision-making and in seeking their own education/training needs based on their situation. Groups may undertake their own research. The project will often provide or fund a facilitator to assist groups to define their own goals and learning needs and to help them realise these.

The Technological Development Model: This model is about individuals working together to develop specific technologies, management practices or decision support systems which will then be available to the rest of the industry or community. It often involves local trials, demonstrations, field days and on-site visits.

The Programmed Learning Model: This model is about delivering specifically designed training programs/workshops to targeted groups of landholders, community members, government personnel and others to increase understanding or skills in defined areas. These can be delivered in a variety of modes and learning approaches.

The Information Access Model: This model is about providing a range of blanket information that individuals and groups can access from a distance and at a time that suits them. It can be based on a web-site, information centre or other centralised locations.

The Personalised Consultant Model: This model recognises the interaction between a mentor or consultant who works over time with an individual or community to improve their managerial, technological, social or environmental situation – or individuals from different backgrounds working together on a 1:1 basis.

We gained insights about best practice for each of these models at the project level. However, the surprise for us was how much these models interacted at a macro level – and how important that interaction is for capacity building and sustainability of project initiatives. We came to realise that projects following particular models could not be looked at in isolation – *best practice* needed to flow through to the interactivity of these models.

Each of these models and their combination all contributed to the *extension/ education* capacity building within individuals and communities.

Macro-level Best Practice

What we discovered was that projects that came under the *Group Empowerment/facilitation* model, for example, relied on '*programmed learning*' projects to provide training when it was appropriate to the individuals or group involved. Likewise, many of the participants for '*programmed learning model*' projects came from people involved in projects under the *Group Empowerment/facilitation* model and the *Technological Development model*. Each of

these models depended on initiatives following the *information access* model for information support and follow-up. Individuals involved in group extension processes often need to work with *mentors or consultants* to see how to appropriate learnings to their own situation. *Technological Development* support is often needed to make advances in practice in key areas.

Best Practice Guideline 1: *Projects need to position themselves in terms of the suite of project models needed in the C2E2S2 to complete and support capacity building in their particular areas.*

This means that a project initiated under the ‘*Programmed Learning*’ model needs to consider how it will provide on-going access to *information support* for participants attending the course – or link into an initiative that does. The projects under the *Group Empowerment/ Facilitation Model* need to consider how they – or others - will support appropriate *technological development* when groups and communities see a need to focus in a certain way.

For example, in the Cotton Industry, insect control and hence Integrated Pest Management is a big issue. Area Wide Management Groups provide a platform based on the *facilitation/empowerment* model for growers and others to explore the issues. The extension teams run local trials/demonstrations with consultants, growers and researchers to look at actual field situations over the seasons providing the *technological development* element. The Technology Resource Centre provides *information support* which individuals and groups can access as they need it and planned specific workshops (eg SPRAYpak) are run as required. Growers in the Cotton industry make extensive use of private *consultants* to assist with individual property initiatives. In these examples, the projects themselves need to diversify to include the other elements – or link in with projects/initiatives that can. The following Matrix is one way of analysing the C2E2S2 to see where a project is positioned and where links are possible.

**The C2E2S2 Matrix
for Pest Control in the Cotton Industry**

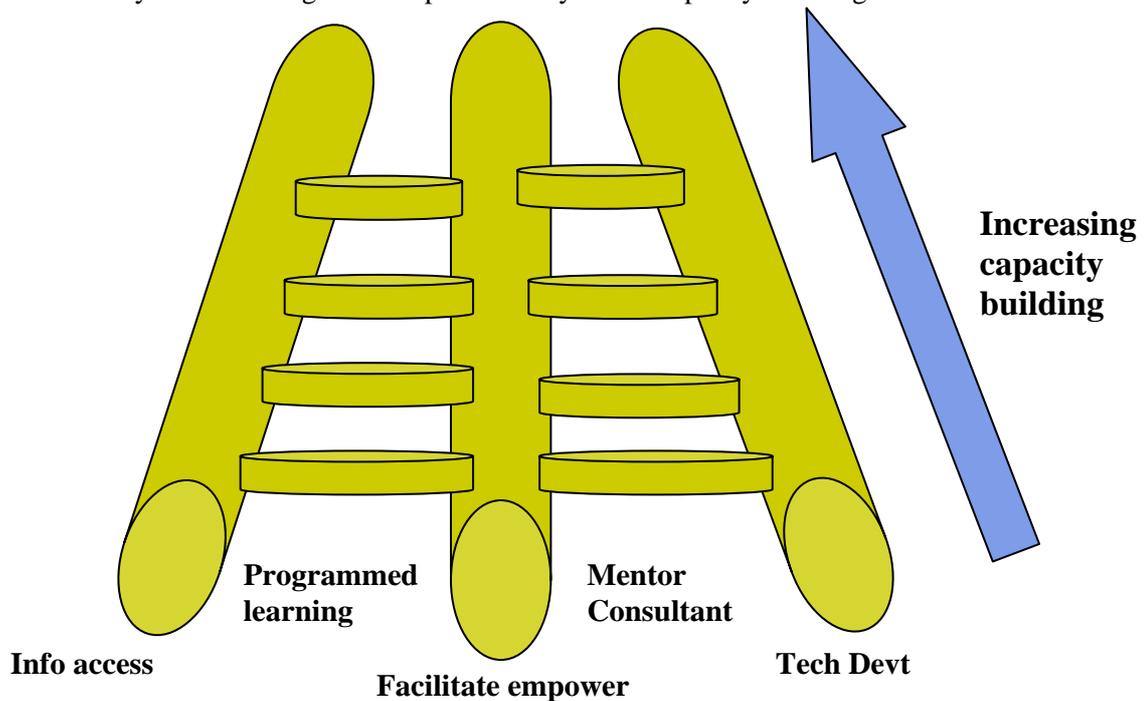
Model	Contribution to capacity building	AWM groups	Local Trials	Techn Res Centre	SPRAY pac	Private Consult
Empowerment & facilitation	Platform for on-going learning	XXXX				
Programmed Learning	Specific topics/ learning events				XXXX	
Technological Development	Development or integration of new approaches		XXXX			
Information Access	On-going access to support information			XXXX		
Consultant/ Mentor	Individual iterative support to make decisions about changes					XXXX

This thinking is supported by Roberts Pine, Nettle & Ho et al (2003) in their draft report on Mapping Service Providers in Australia:

A shift towards thinking of service providers as capacity-builders is attractive given the noted decline in rural community health, but should not be overstated as the be-all of extension activity. Other forms of extension, as outlined above by Coutts (1997) should not be completely discarded at the expense of a capacity building discourse, as to a large extent, capacity building could not occur without a diversity of

approaches. A facilitative/empowerment extension method is important in this, but programmed learning, technological development and the transfer of science and research for clients to initiate is still significant even if their local, embedded knowledge is not explicitly drawn upon. More recent views of service provision as a learning relationship between advisor and client need to be included in our mapping of service provider practice (LEARN, 2000). A mapping exercise, therefore, provides an opportunity to listen to service providers as they talk about their needs in a way that better identifies what they actually do (their practice). (Roberts et al, P31)

Another way of visualising this complementarity is the Capacity Building Ladder:



The Capacity Building Ladder

A central leg of the ladder is the *facilitation/empowerment* model – an on-going process to maintain motivation and a framework for development and change management. *Information access* is critical so that individuals and groups can access the type of information in the form that they require *when they need it*. Mirroring the on-going facilitation and information access is the third leg – projects that deal with specific *technological development* – incorporating learning and information into changes in new technology and practice. The left rungs show the need for on-going specific training/education products to allow individuals/groups to move to the next level. The right rungs indicate the value in individual enterprises having iterative consultant/mentoring support for incorporating changes at an enterprise level.

Project Initiation and Relationships

An important point to note is that we have focused on actual projects that are currently running – or have been recently completed. We see the project in action –and only a glimpse of the ground work that went into their development. The projects then are presented are the result of interaction between participants about the need for the projects and defining the way in which they would operate.

Some projects have clearly resulted from demand from the community/growers. **BeefPlan** is an example of a *Group Facilitation/Empowerment* model that resulted from grower demand and vision. In this model, self formed grower groups are provided with planning and

facilitation support to assist a group of growers to pursue their common interests and needs in a difficult environment. It is incredibly interactive, flexible and robust. **BestWool 2010**, another *Group Facilitation/ Empowerment* model is an example where industry organisations joined with government to develop a strong facilitation network to support self-driven industry groups. In both cases funding bodies have entered into partnerships to bring about the vision and meet the needs.

Other projects have started out as ‘top down’ and evolved as a result of interaction/ relationship between funders, researchers and the broader community. For example, **Research to Practice® Viticulture** was initially designed to facilitate practical training for grape growers and associated industry personnel in integrated pest management (IPM) with a view to improving levels of adoption and assisting with informed decision making. Over the past 7 years (1996 – 2003), it has evolved to become a national “flagship” program for the *Grape and Wine Industry covering a broad series of topics focussed primarily on sustainable economic growth along with natural resource management. It involves researchers and experts from numerous agencies and organisations across the nation* (Coutts, Roberts et al – Joint venture data base). The National Heritage Trust ran a pilot capacity *training* project for facilitators which resulted in on-going networking and ‘*empowerment*’ of this group (Roberts & Coutts 2002).

The Germinator model developed by Paine and Kenny (2002) focuses on the learning partnership between land manager and adviser and this model fits well into the *Personalised Consultant Model*.

The point is that extension/education projects/initiatives can be initiated from any part of the C2E2S2, the critical element is to involve all of those parties who wish to contribute to its outworking.

Best Practice Guideline 2: *Work towards an environment that stimulates innovation and initiative in extension/education across the total education/extension support system (C2E2S2) and encourages interaction to develop it and maximise its value.*

Micro Level Practice

The analysis of recent and current extension/education projects has provided many insights into current best practice at the project level within each of the models. The full analysis of these models is still in progress. Initial indicators of best practice are included below. Examples are taken from the database developed with sample projects.

The Group Facilitation/Empowerment Model:

Examples: *BestWOOL 2010; BeefPlan; Women in Dairying; Central Highlands Regional Resource Use Planning Project.*

Indicative Best Practice Guidelines:

- Self formed groups are best
- Allow groups to find/select their own facilitators – with guidelines/boundaries
- Follow an annual planning cycle
- Use benchmarks – for the group and encourage individuals to benchmark
- Provide support and training for facilitators
- Provide opportunities for groups/representatives to meet/interact with other groups
- Provide exposure to the wider picture (scanning) to help broaden options
- Encourage groups to become self-funding after an interval

Overall, provide for a supporting and guiding framework where the need is indicated. By definition, the groups will ultimately require less outside assistance over time – yet may draw on an increasing input from outside of their immediate resource area.

The Technological Development Model:

Examples: *Western Flower Thrips Management Strategy; Rural Water Use Efficiency Initiative; Living Landscapes; Farmscape on-line; Profitable Pastures Project; Swan-Canning Clean-up Program.*

Indicative Best Practice Guidelines

- Look to establishing strong industry-funder-government partnerships where applicable
- Have a strong focus on benchmarking existing technology and practices and related outputs (productivity, economic, environmental and/or social)
- Include a strong on-farm/in-community practice component to ground and test technology/practice change
- Take the broader ‘target’ community along with you through excellent use of mass media and other communication channels
- Include local/regional committees to overview direction and developments
- Use incentives/awards to encourage interest in developments
- Link in to applied research and tie in with impacting legislation.

Overall, this is a hands-on approach within defined boundaries. There is a relative clear goal about what type of developments are needed. Projects will have a life – often to be replaced with projects that focus on related issues as critical needs become clearer.

The Programmed Learning Model:

Examples: *Research to Practice® Viticulture; Master Tree Grower Program; Quality Management Training for the Vegetable, Melon, Stonefruit and Mango Industry; Grazing Land Management and Northern Nutrition workshops.*

Indicative Best Practice Guidelines:

- Base the learning events on researched and expressed industry needs
- Incorporate latest research on the topic
- Include local examples
- Change the focus along with needs of different geographical areas
- Pilot test the events with a range of participants
- Use a tried and tested TQM system
- Link outcomes with competency standards from the Vocational Education System (VET) from outset
- Provide for mentoring – particularly of small enterprises – following or between events
- Use interactive and small group work to balance ‘lectures’
- Allow for participants to develop their ‘next steps’ by the end of the event and way of facilitated re-0viting of these step.

Overall, this may appear a top-down process but must be based on widespread ‘grassroots’ involvement in defining needs and testing content to ensure relevance and participation.

The Information Access Model:

Examples: *DPI Queensland Website; Scienceworks Museum Melbourne*

Indicative Best Practice Guidelines

- The information site needs to be continually publicised
- The basis of finding information needs to be intuitive rather than classical 'library' based
- Specific information links – or access points – needs to be circulated at timely intervals
- Some form of 'human' facilitation adds value
- Scanning for new information and links/linkages with other information initiatives is necessary

We are yet to develop this model further – more examples are needed – but it is obvious that clear guidance is needed for individuals and groups to seek and effectively use information from an information initiative.

The Personalised Consultant Model:

Examples: There are numerous examples in all industries but these have not been collected or collated for this review.

Indicative Best Practice Guidelines

These are yet to be explored and developed. One key point has been the need for consultants/mentors to encourage individuals to understand and make their own decisions based on their understanding of the facts and their own unique situation – rather than providing ready made answers.

Best Practice Guideline 3: *Lessons can be learnt from past projects that have tackled similar issues within the C2E2S2 – seek these out and build on others' experience.*

Concluding remarks

Our analysis of these current and past projects has provided a unique opportunity to explore 'what works and why' – based on actual practice. There are many exciting and innovative extension and education initiatives occurring across Australia. Extension theory has been mixed with practical realities to produce this wonderful mix of projects that are tackling significant concerns of Australian industries and communities – and making a difference. Lets not reinvent the wheel – lets learn from each other and build better theories – and better practice.

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